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A STUDY OF UNIFORM PRICING AND ITS POSSIBLE EFFECTS ON
THE CANADIAN GROCERY PRODUCTS MANUFACTURING INDUSTRY

by



HARVEY WILSON FORD

A THESIS

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled A Study of Uniform Pricing and Its Possible Effects on The Canadian Grocery Products Manufacturing Industry submitted by Harvey Wilson Ford in partial fulfilment of the requirements for the degree of Master of Business Administration.

ABSTRACT

One of the important decisions in the pricing component of the marketing mix is the geographic pricing policy to be used. The existing literature concentrates on two methods of geographic pricing--f.o.b. factory and basing point.

This study, while dealing generally with geographic pricing, concentrates on uniform pricing. The relevant literature is discussed and an attempt is made to theoretically assess the impact of uniform pricing (as compared to non-freight absorbing pricing) on three areas--location of production facilities in the Canadian grocery products manufacturing industry, profits and social costs.

A mail survey of the Canadian grocery products manufacturing industry was conducted in the summer of 1966. This survey produced current and historical information on (1) the geographic pricing policies used, (2) the market areas and production locations for various products, and (3) the reasons for changes in pricing policies and production locations. Each respondent was asked to provide information for only one of his products.

Although the survey did not provide sufficient information to establish a causal relationship between the geographic pricing policy used and the location decision, it did produce a number of interesting results, including:

1. Uniform pricing is the most widely used geographic pricing policy for the products of the survey respondents. However,

four other policies are also extensively used.

2. Although there appears to be an industry trend towards the use of freight absorbing, rather than non-freight absorbing, pricing, this trend does not seem to be favoring uniform pricing in preference to other geographic pricing policies.
3. For very few products was there a change in the geographic pricing policy over the life of the product.
4. Most products are marketed nationally. The number of market regions does not appear to depend on whether a freight absorbing or non-freight absorbing pricing policy is used due, in part, to a greater decentralization of production by manufacturers using the latter policy.
5. Production is highly centralized with Ontario being, by far, the most important production region. Products which are uniform priced tend to be produced in fewer regions than products priced using some other geographic pricing policy. Firms using a non-freight absorbing pricing policy are more likely to have changes in their locations of production than are firms using freight absorbing pricing.

A mail survey of the leading retail food private branders was also carried out but, due to the limited data received, only a very general analysis could be made.

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A number of people contributed to the success of this project. To all of them I would like to express my sincerest gratitude.

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CHAPTER I

INTRODUCTION

One of the important components in the marketing mix is the price variable. The policies adopted in this area have important implications not only for the firm itself but also for society as a whole, as evidenced by the continuing struggle, in this and other countries, to control inflation.

This thesis contributes to the literature on pricing as it deals generally with the subject of geographic pricing and, specifically, with uniform pricing and its possible effects on the Canadian grocery products manufacturing industry, particularly as regards the location of production facilities.

Chapter I (1) sets out the objectives of the study, (2) provides a justification for this particular research project, (3) defines the important terms used, and (4) gives a brief overview of the remaining chapters in the thesis.

1. OBJECTIVES OF THE STUDY

This study is divided into two main parts--a theoretical analysis and a field survey. Utilizing a literature survey as background, an attempt is made to theoretically assess the impact of uniform pricing, as compared to a non-freight absorbing geographic pricing policy, on such areas as the location decision, industry and firm profits, the average price level, the variety of competing products available to the

consumer, the number of firms in an industry, and the possibility of unnecessary freight costs.

In the field survey portion of the study, the data received from the mail questionnaires sent to Canadian grocery products manufacturers and retail food private branders will be analyzed in an attempt to determine:

- (1) The geographic pricing policies currently being used in the Canadian grocery products manufacturing industry.
- (2) Whether there have been any significant shifts in geographic pricing policies in this industry over the years.
- (3) Whether these pricing policy shifts have taken place concurrently with changes in the location of manufacture, suggesting a possible relationship between the two decision areas.
- (4) The current importance of uniform pricing in the Canadian grocery products manufacturing industry and whether there has been a trend towards increasing use of this method of geographic pricing in the industry.
- (5) Whether the geographic pricing policies of Canadian retail food private branders, and the possible effect of these policies on location, differ from the results obtained in the survey of Canadian grocery products manufacturers.

For the purposes of this study, the above objectives have been translated into the following specific hypotheses which are tested using the survey data collected:

- (1) Uniform pricing is an important geographic pricing policy in the Canadian grocery products manufacturing industry.
- (2) In this industry, there has been a trend towards greater use of this method of geographic pricing.
- (3) The spatial distribution of production facilities in the Canadian grocery products manufacturing industry is significantly affected by the geographic pricing policy used.
- (4) The geographic pricing policies used by Canadian retail food private branders, and the effect of these policies on production facility location, do not differ significantly from those in the Canadian grocery products manufacturing industry.

2. JUSTIFICATION FOR THE STUDY

Simply pointing out the importance of the pricing component in a firm's marketing mix is not really a sufficient *raison d'être* for a study such as this one. In order to provide justification for this research project, it is necessary to answer the following questions: How thoroughly has the area of geographic pricing, and, in particular, uniform pricing, been covered in already existing literature? If there are gaps in the treatment of geographic pricing, is this aspect of pricing of sufficient importance to merit further treatment?

Looking first at the literature on geographic pricing, it appears about ninety per cent of it is concerned with either f.o.b. factory or basing point pricing, while the remaining ten per cent

discusses the other forms of delivered pricing such as freight absorption, uniform and zone. The disproportionate emphasis on f.o.b. factory and basing point pricing reflects the attacks, mainly by various writers in the United States, on the latter method of pricing. Writers for and against basing point pricing have usually compared this pricing policy with f.o.b. factory pricing in an attempt to see whether or not basing point pricing is harmful to the economy. The small amount of discussion on the other forms of delivered pricing is found mainly in introductory marketing texts. There is very little material of a substantial nature to be found in other sources. In terms of the quantity of attention devoted to it in recent writings, there is a great deal of room for more studies on uniform pricing (and, for that matter, on any other form of delivered pricing except basing point).

Given that there are gaps in the literature, is delivered pricing of sufficient importance to warrant further treatment of this neglected area? In any exchange of goods and services there are spatial considerations. In certain transactions the spatial aspects are insignificant, but in the majority of exchanges the provision of time and place utility is extremely important. Certainly there has been a growing awareness of the importance of spatial considerations, i.e., logistics, in the last ten years.¹ Management has become much more cognizant of the high costs

¹Illustrative of this is the introduction of textbooks in this area for the first time. Examples include Edward W. Smykay, Donald J. Bowersox, and Frank H. Mossman, Physical Distribution Management (New York: The Macmillan Company, 1961); J. L. Heskett, Robert M. Ivie, and Nicholas A. Glaskowsky, Jr., Business Logistics (New York: The Ronald Press Company, 1964); and James A. Constantin, Principles of Logistic Management (New York: Appleton-Century-Crofts, 1966).

associated with spatial activities and is anxious to minimize these costs, commensurate with good service. One of the logistics costs which is currently receiving much attention is transportation. Since the geographic pricing policy used by a firm directly reflects how the firm desires to treat product freight costs, it too is likely coming under much closer scrutiny. Only by knowing more about the effects of the various geographic pricing policies can a firm hope to choose the policy which is best suited to its operation.

That delivered pricing systems are an important segment of geographic pricing policies is evident from the following quotation:

A knowledge of the operation of such systems is indispensable . . . because they have had a profound effect upon industrial and marketing development in this country, because of their influence upon plant location, selection of sources of supply, ability to compete, and extent of market areas, and because of numerous controversial economic and legal questions to which they have given rise.²

The reason uniform pricing, rather than any of the other neglected forms of delivered pricing, was chosen as the focal point of this study was because it applies "to more products than any of the other delivered pricing systems."³ One can speculate as to whether or not uniform pricing, because of its importance, might be the next form of delivered pricing involving freight absorption and phantom freight to come under

²Theodore N. Beckman and William R. Davidson, Marketing (7th ed.; New York: The Ronald Press Company, 1962), pp. 727-728.

³Heskett, Ivie, and Glaskowsky, op. cit., p. 228.

government scrutiny. Only by knowing the effects of this form of pricing, some of which it is hoped will be pointed out in this study, can public bodies take a realistic stand concerning uniform pricing.

The individual firm must also know more about uniform pricing before it can be sure that it is the best pricing policy to use. Current information in the literature is just not adequate to evaluate the effectiveness of this pricing policy.

Thus, it can be seen that much more research needs to be carried out to evaluate the use and effects of a uniform geographic pricing policy.

3. DEFINITIONS USED

To provide the reader with a convenient reference source for the key terminology used in this thesis and to ensure that his interpretation of these terms is the same as that intended by the writer, this section sets out the major definitions used in the study.⁴

Geographic pricing policies: As part of his pricing mix, a seller must decide how he will deal with transportation costs. Geographic pricing policies "are concerned with the methods used to recover transportation costs from the buyer"⁵ and include all the pricing policies to

⁴Except where otherwise noted, these definitions are a composite of the definitions found in several marketing articles and books.

⁵Jules Backman, Price Practices and Price Policies (New York: The Ronald Press Company, 1953), p. 174.

be discussed in this study. Broadly speaking, these policies may be divided into two categories: f.o.b. and delivered pricing.⁶ The latter includes policies in which the price quoted is as of the buyer's place of business while the former comprises those policies where the price quoted is as of the seller's place of business. To minimize confusion, it must be pointed out that two of the pricing policies used in this study--f.o.b. buyer's warehouse with no freight absorption and f.o.b. buyer's warehouse with freight absorption--are delivered prices despite the fact that f.o.b. appears in their title. "Prices quoted on a delivered basis usually involve discrimination [i.e., freight absorption or phantom freight]; those quoted f.o.b. usually do not. But this is not invariably the case."⁷ An exception would be f.o.b. buyer's warehouse with no freight absorption which is a delivered price with no discrimination.

F.O.B. factory pricing: The price quoted is that at the source of supply with the buyer paying the freight. In the literature on pricing, this policy is also referred to as f.o.b. mill or f.o.b. shipping point.

Individual store pricing: The price charged to the consumer varies from store to store within the retail chain, reflecting differing

⁶Ibid.

⁷Clair Wilcox, Public Policies Toward Business (3rd ed.; Homewood, Illinois: Richard D. Irwin, Inc., 1966), p. 223.

handling and freight costs.

F.O.B. buyer's warehouse with no freight absorption: The price quoted is as of the buyer's place of business. It includes the actual freight cost.

F.O.B. buyer's warehouse with freight absorption: The price quoted is that at the buyer's place of business. It includes an amount less than the actual freight costs, because the seller is absorbing some or all of the freight. In the literature this policy is also called freight equalization.

Uniform pricing: An individual seller quotes the same delivered price for an item to all buyers, regardless of their location. This policy is also referred to in the literature as single pricing, national pricing or postage stamp pricing.

Zone pricing: The market area is divided into geographic zones and a uniform price is set within each zone, although the delivered price varies from zone to zone.

Basing point pricing: The price quoted a buyer is equal to a predetermined manufacturing cost plus the transportation cost from the designated location (basing point) nearest to the buyer's location. There may be either single or multiple basing points, and it is not necessary that either the point of production or the origin of shipment correspond to the basing point used in determining the price.

Identical pricing: This refers to the situation where all suppliers "charge the same delivered price for their products at any given destination. Basing point systems are the best known examples."⁸

Homogeneous products: When price is the only criterion used by a buyer in selecting one product from a number offered him by competing sellers, the products offered are referred to as homogeneous. In other words, each product offered provides the same total physical and psychological satisfactions to the buyer. Consequently, price is the sole influencing factor in the buying decision. Standardized goods is another term used in the literature for these types of products.

Heterogeneous products: When price is not the only component in the marketing mix influencing the selection of a product, the competing products are said to be heterogeneous. In the literature these goods are also called differentiated products.

"Primary Product": Respondents to the questionnaire sent out in the field survey segment of this research project were asked to provide data, not for their whole product line (since this would likely have greatly reduced their willingness to cooperate), but rather for only one of their products which, for the purposes of this study, was designated as the "primary product". The definitions the respondents were asked to use for "primary" and for "product" are contained in Chapter III and also in Appendix A.

⁸ Beckman and Davidson, op. cit., p. 727.

4. PLAN OF PRESENTATION

Chapter II, with a study of the literature as background, discusses firstly, the reasons why a firm may choose to use uniform pricing, and secondly, the possible effects the adoption of this form of pricing may have on three areas--the location decision, firm and industry profits, and social costs.

The field survey methodology is described in Chapter III. Included in the chapter are the reasons for choosing to survey the grocery products manufacturers and retail food private branders, the design and pretest of the mail questionnaires, and the possible limitations of the field survey.

In Chapter IV, the findings of the field survey are presented and analyzed. An attempt is made to relate, wherever possible, the conclusions drawn from the theoretical analysis (Chapter II) with the results of the field survey. The hypotheses are also tested in this chapter.

Chapter V summarizes the results of the study and provides some direction for further research.

CHAPTER II

UNIFORM PRICING: REASONS FOR, AND POSSIBLE EFFECTS OF, ITS USE

The first section of this chapter points out the reasons why a manufacturer would use a uniform pricing policy. Section 2, which discusses the relevant literature, is a necessary prerequisite for section 3, in which an effort is made to assess the impact of uniform pricing.

1. WHY AND WHEN USED

The following are the main reasons why a firm would decide to use uniform pricing, rather than another form of geographic pricing:

1. A manufacturer may desire to keep his prices uniform as an aid to maintaining standard retail prices either for use in national advertising or "because of a customary or strategic wholesale or retail price."¹
2. It is one way of reducing any desire distributors have to encroach on each other's territories, i.e., uniform pricing puts distributors in adjoining territories on an equal competitive price basis, which should help to maintain good will among links in the channel of distribution.

¹Gardner Ackley, "Price Policies," Industrial Location and National Resources (Washington: National Resources Planning Board, 1943), p. 305.

3. In those fields (such as grocery and drug) where the seller must deal with a large number of buyers, it becomes extremely difficult and costly to allocate transportation costs to individual orders. As a result, quoting of prices is simplified and made less costly by the use of uniform pricing.
4. It allows the seller to expand his sales territory, without pricing himself out of distant markets, as he is, in effect, using local buyers to subsidize those further away. A larger market area may lead to economies of scale in both production and distribution.
5. Uniform pricing possibly builds buyer confidence in the seller's product, since the price is the same in all markets.²
6. Whenever product freight costs are relatively high, uniform pricing, like other freight absorbing geographic pricing policies, can be used to restrict market entry in outlying regions. Whereas under a non-freight absorbing pricing policy, small local producers in these outlying regions could profitably enter the market, they are prohibited from doing so if the large seller's uniform price is low enough to make it uneconomical for these small firms to compete.³
7. If firms in an industry were interested in having identical

²Heskett, Ivie and Glaskowsky, op. cit., p. 228.

³Ackley, op. cit., p. 304.

prices, uniform pricing would be one of the easiest ways of accomplishing this goal. The price leader would establish a uniform price which the other members of the industry could duplicate readily. No collusive material, such as common freight rate books, would be necessary. As Hoover points out:

The interest of the sellers as a group is in curbing price competition, while the individual seller might feel tempted (especially when trade is slack) to grab a larger share of the business by quietly making price concessions. The simpler the price formula the more conspicuous and difficult do such deviations become.⁴

Uniform pricing will generally be found when one or more of the following conditions exist:

First, when the costs of transportation are very small; second, when they are extremely costly to calculate; and finally, when the seller has strong reasons for wanting to sell his product, or to have his distributors sell his product, at a uniform price over a large area.⁵

Bingham points out why uniform pricing is used in the grocery products manufacturing industry.

The importance of freight [in relation to the net profit margin], the force of competition, the need for a wide market to achieve production and distribution economies, the need for simple

⁴Edgar M. Hoover, The Location of Economic Activity (New York: McGraw-Hill Book Company, Inc., 1948), p. 57.

⁵Alfred R. Oxenfeldt, Industrial Pricing and Market Practices (New York: Prentice-Hall, Inc., 1951), p. 239.

sales terms in dealing with thousands of customers, and the desire to enlist distributor aid in marketing have all contributed to its use.⁶

2. EFFECTS OF UNIFORM PRICING: LITERATURE CONTRIBUTIONS

There are three general areas--location, profits, and social costs--which may be affected by the geographic pricing policy chosen. For various reasons, to be outlined below, the literature offers very little helpful information.

A. On Location

Turning first to the theories of plant location, the various attempts on the part of economists to develop a theory have progressed along two lines.⁷ The first approach, which began with Weber,⁸ emphasizes the search for the least-cost site under the assumptions of a point-located market and varying costs (largely due to transportation and labor) from site to site. "The locational decision thus involves

⁶Robert H. Bingham, "The Uniform Delivered Pricing Method in the Grocery Manufacturing Industry," Journal of Marketing, Vol. 14, No. 4 (January, 1950), p. 595.

⁷Melvin L. Greenhut, "Integrating The Leading Theories of Plant Location," The Southern Economic Journal, Vol. XVIII, No. 4 (April, 1952), p. 526.

⁸Alfred Weber, Über den Standort der Industrien, translated by C. J. Freidrich as Alfred Weber's Theory of the Location of Industries (Chicago: University of Chicago Press, 1958).

finding the optimum in substitution between the factors of cost."⁹ In this approach there is an "inherent disregard of the uncertain, game-like locational interdependence of firms."¹⁰

The second approach, pioneered by Fetter¹¹ and developed extensively by Lösch,¹² is concerned with locational interdependence and "is based on conditions of monopolistic competition, as opposed to the perfect competition existing in the least-cost theory."¹³ The cost of procuring and processing raw materials is assumed constant over space and buyers are spread over an area rather than being concentrated at a single point. Delivered prices vary according to the distance between point of production and buyers. This allows sellers, by dispersing, to gain monopoly control over buyers located near their plants. The boundary of the market area is reached when the price becomes so high buyers purchase from an alternative lower-priced source.

⁹Melvin L. Greenhut, Microeconomics and the Space Economy (Chicago: Scott Foresman and Company, 1963), p. 162.

¹⁰Ibid., p. 154.

¹¹Frank A. Fetter, "The Economic Law of Market Areas," The Quarterly Journal of Economics, Vol. XXXVIII, No. 2 (May, 1924), pp. 520-29.

¹²August Lösch, Die Raumlliche Ordnung der Wirtschaft, translated by William H. Woglom, assisted by Wolfgang F. Stopler, as The Economics of Location (New Haven: Yale University Press, 1954).

¹³D. M. Smith, "A Theoretical Framework for Geographical Studies of Industrial Location," Economic Geography, Vol. 42, No. 2 (April, 1966), p. 99.

It should be noted, however, that "the theories of the least-cost location and the interdependent location are, despite their differences, quite similar; both emphasize the search for the site which offers the greatest spread between total costs and total revenues. It is really the assumptions that differ."¹⁴ Greenhut¹⁵ has attempted to fuse these two approaches and Isard¹⁶ has developed a general theory based on the principles of substitution.

Despite all the literature on location theory, there is little which is useful for this study, basically because location theory writers have concentrated almost exclusively on f.o.b. factory pricing and homogeneous goods. Only Lösch¹⁷ and Greenhut¹⁸ discuss the location theory problem under delivered prices but their treatment is extremely brief. Most of their writing, and that of all other writers on location

¹⁴Greenhut 1952, op. cit., pp. 537-38.

¹⁵Greenhut 1952, op. cit.; "A General Theory of Plant Location," Metroeconomica, Vol. VII, No. II (August, 1955), pp. 59-72; Plant Location in Theory and Practice (Chapel Hill: University of North Carolina Press, 1956); and Greenhut 1963, op. cit.

¹⁶Walter Isard, "A General Location Principle of an Optimum Space-Economy," Econometrica, Vol. 20, No. 3 (July, 1952), pp. 406-30; and Location and Space-Economy (New York and Cambridge: John Wiley & Sons, Inc., and The Technology Press of the Massachusetts Institute of Technology, respectively, 1956).

¹⁷Lösch, op. cit., Chapter 13.

¹⁸Greenhut 1956, op. cit., pp. 76-80, 156-162, 305-16; and Greenhut 1963, op. cit., pp. 152-56, 186-90.

theory, assumes f.o.b. factory pricing. As Hoover points out, "The effect of geographic price discrimination upon the locations of the sellers who practice it is an intricate question, to which no complete theoretical or factual answer has yet been given."¹⁹ As some measure of consolation, both Hoover²⁰ and Ackley²¹ feel the importance of pricing policy as a locational factor, except in rare cases, is often overestimated. One of the exceptions would seem to be the basing point system of pricing, when it is used by all firms in an industry. Writers have indicated this form of pricing led to distorted locational patterns in the industries which used it.²²

Probably a more serious limitation of location theory, at least for the purposes of this study, arises because writers in this field base their work on homogeneous products. Uniform pricing is used primarily for the pricing of heterogeneous products (particularly in the grocery products industry) and may, in fact, seldom be employed in the pricing of homogeneous goods. Hotelling seemed to be one of the

¹⁹Hoover, op. cit., p. 57.

²⁰Ibid.

²¹Ackley, op. cit., p. 302.

²²See, for example, Arthur R. Burns, The Decline of Competition (New York: McGraw-Hill Book Company, Inc., 1936), Chapter VII; Fritz Machlup, The Basing-point System (Philadelphia: The Blakiston Company, 1949), pp. 233-37; and George W. Stocking, Basing Point Pricing and Regional Development (Chapel Hill: University of North Carolina Press, 1954), pp. 60-64.

few writers aware of the possibility of heterogeneous goods when he said there are groups of buyers who will still deal with a seller despite the fact he has a higher price than his competitors.²³ He then said any of the causes of this could be included as part of the transportation cost²⁴ which, in effect, turned his analysis into f.o.b. factory pricing. This method of treating non-price factors is highly unsatisfactory, as it does not allow for overlapping market areas among competitors, a fact of life under uniform pricing. Greenhut also recognizes heterogeneous products exist, leading to overlapping market areas.²⁵ Most of his analysis, however, assumes homogeneous products, i.e., buyers choose sellers on the basis of price alone. His discussion on heterogeneous products is limited to a very general and brief treatment.

Greenhut, then, is the only researcher who has recognized and at least briefly discussed the effect on location of both delivered prices and heterogeneous products.

B. On Profit Levels And Social Costs

Almost all of the literature concerning profit levels and social costs as a function of geographic pricing concerns itself with a comparison of f.o.b. factory and basing point pricing. The conclusions

²³Harold Hotelling, "Stability in Competition," The Economic Journal, Vol. XXXIX, No. 113 (March, 1929), p. 44.

²⁴Ibid., p. 46.

²⁵Greenhut, 1956, op. cit., p. 31; Greenhut, 1963, op. cit., p. 180.

drawn are generally not applicable to this study for two reasons. First, the discussions on the effects of basing point pricing assume, sometimes explicitly but most often implicitly, this method of pricing involves collusion. Although, as pointed out earlier, uniform pricing could lead to agreed upon identical prices, instances of this occurring could not be found and so it has been assumed there is no collusion with uniform pricing. Consequently, conclusions drawn from a literature which assumes collusion do not seem appropriate for the analysis in this chapter.

A second limitation of the literature, as noted in the discussion on location, is its almost complete concern with homogeneous goods. This is likely because the products of two important industries involved in basing point pricing, cement and steel, are, for many buyers, homogeneous goods. Since most grocery products are heterogeneous in nature, the basing point pricing literature is really not valid for a discussion of the effects of uniform pricing.

3. EFFECTS OF UNIFORM PRICING: A THEORETICAL ANALYSIS

A. Pricing Policy To Be Compared With Uniform Pricing

It is not possible to make an analysis of the 'effects' of anything unless it is clearly understood what set of conditions is to serve as the standard of comparison. . . . Thus, the evaluation of the 'consequences' of a given pricing technique can refer only to differences in the results of using it instead of another, and this other technique must be specified.²⁶

²⁶Machlup, op. cit., p. 182.

The pricing policy chosen for comparison purposes should be (1) a reasonable alternative to uniform pricing, and (2) different enough to yield meaningful distinctions when determining the possible effects of the two pricing policies.

Choosing a pricing policy, which would not likely ever be used by the types of industries where uniform pricing is typically found, might produce some interesting comparisons but the results would have little significance. Of all the geographic pricing policies, basing point seems the least likely substitute for uniform pricing. It might be argued this form of pricing would be a useful comparative policy, since it may only be a short step from the uniform prices, under uniform pricing, to the identical prices of basing point pricing. For the following reasons, it was decided not to use basing point pricing in the comparison. First, identical prices almost necessitate homogeneous goods. "Standard products and standard services are thus the ones which can be most easily subjected to price fixing, price control and price maintenance schemes. . . . The greater the differences between the products are, the harder will it be to obtain compliance with a uniform price or to agree on 'price differentials' and enforce them once they have been agreed upon."²⁷

Second, economies of scale would appear to be one of the major influences in the decision to adopt a basing point scheme, as capital

²⁷Fritz Machlup, The Economics of Sellers' Competition (Baltimore: The Johns Hopkins Press, 1952), p. 166.

investment is relatively high in relation to variable costs.²⁸ For food products, in particular, "size economies . . . appear to be relatively low."²⁹ As a result, basing point pricing is probably not considered, by the majority of food manufacturers, to be a reasonable alternative to uniform pricing.

Requiring the comparative pricing policy to be different enough from uniform pricing, in order to produce meaningful distinctions when analyzing effects, would rule out zone pricing as this is just uniform pricing applied to various geographic zones.

The only freight absorbing pricing policy not eliminated so far is f.o.b. buyer's warehouse with freight absorption. This policy is distinguishable from uniform pricing mainly because it does not involve phantom freight.³⁰ For those products where the collection of phantom freight per unit sold is an insignificant amount, it is quite possible the delivered prices under uniform pricing would be similar to those resulting from the adoption of an f.o.b. buyer's warehouse with freight absorption policy. Because of the concentration of the Canadian market (to be discussed later), the collection of phantom freight for

²⁸E. Jerome McCarthy, Basic Marketing, A Managerial Approach (rev. ed.; Homewood, Illinois: Richard D. Irwin, Inc., 1964), p. 831.

²⁹National Commission on Food Marketing, Studies of Organization and Competition in Grocery Manufacturing, Technical Study No. 6 (Washington: U.S. Government Printing Office, June, 1966), p. 8.

³⁰When the price charged to a buyer includes an amount for freight in excess of the actual freight cost, this additional charge is called phantom freight.

many uniform priced grocery products may be a very small amount per unit sold. Consequently it was decided not to use f.o.b. buyer's warehouse with freight absorption as the comparative pricing policy, since, in all likelihood, the effects of this policy, on the areas to be studied (location, profits and social costs), would not be significantly different than those observed with uniform pricing.

By a process of elimination, it appears some form of non-freight absorbing pricing policy would be the best alternative to compare to uniform pricing. This makes sense since what is really being studied, when analyzing the impact of uniform pricing, is the possible effect of freight absorption and phantom freight. Comparing it to a policy where there is neither freight absorption nor phantom freight should result in a more meaningful assessment of uniform pricing.

Should public bodies decide to investigate uniform pricing, it is quite possible their approach will be to compare this form of pricing with a non-freight absorbing pricing policy. This is another justification for the comparison made in this study.

Because all non-freight absorbing pricing policies result in the same net price being received by the seller, it is convenient, for the purposes of this discussion, to treat all of these policies as one. This has been done and, to simplify terminology, this grouping is referred to as f.o.b. pricing.

B. Characteristics Of Canada Relevant To This Study

The smallness of Canada's population, relative to its geographic

area, tends to make the problem of logistics a significant one for those firms wishing to market their products all across the country. Offsetting this problem to a large extent is the high concentration of population in two adjacent provinces--Ontario with about thirty-five per cent of the total population and Quebec with twenty-eight per cent. The next two largest provinces--British Columbia with ten per cent of the population and Alberta with eight per cent--are also adjacent to one another but are separated from the Ontario-Quebec market by two thousand miles of relatively low-density populated areas.

The problem of logistics is further reduced since, in all four of these provinces, approximately half the population is to be found in one or two major metropolitan areas.

This division of Canada into two distinct market areas is complemented by the location of raw materials. For most grocery products, the best raw materials sources are located in Ontario, Quebec and British Columbia. There are exceptions, such as sugar, flour and salt production on the Prairies and seafood products being produced in the Maritimes, but, for the majority of grocery products, the important raw materials sources are in the three previously mentioned provinces.

C. Effects On Location

Although it is theoretically possible for the geographic pricing policy chosen to affect the locational patterns of both the manufacturing firms using the policy and the firms' customers,³¹ this study will

³¹Ackley, *op. cit.*, p. 313.

only consider the effects on the former.

(i) Factors To Be Considered

The distribution of manufacturing sites throughout a market area is largely influenced by three factors--the level of product freight costs, the price elasticity of demand, and the differences in raw materials and production costs at various sites. The higher the product freight costs, the greater the price elasticity of demand, and the smaller the differences between procuring and processing costs at various sites, the greater will be the tendency for the spatial separation of production facilities. This spatial separation can be achieved in two ways--new firms entering the market or existing firms moving to a multi-plant operation.

Each of the above three factors influencing location must be looked at in relation to the Canadian grocery products manufacturing industry.

Product Freight Costs

Since no figures on product freight costs in the Canadian grocery products manufacturing industry could be found, it was necessary to draw conclusions on the basis of the few statistics available in United States publications. Bingham reported freight costs ranging from 1.3 to 6.5 per cent of delivered price for twenty-five products commonly sold on a uniform price basis.³² He also pointed out that

³²Bingham, op. cit., p. 595.

freight costs to a manufacturer's more distant markets may range as high as fifteen per cent.³³ The National Commission on Food Marketing study, some fifteen years later, showed other distribution and delivery expenses amounting to 5.6 per cent of net sales for cereals³⁴ and 8.0 per cent for crackers and cookies.³⁵ These are industries which use uniform pricing.³⁶

In all likelihood, the figures in Canada would be higher. American firms in these industries are typically multi-plant concerns,³⁷ whereas in Canada this is not the case, due to the smaller-sized market. The higher average length of shipment in this country would increase the freight costs and, as a very rough estimate, it may not be too far out of line to suggest that freight costs average in the neighborhood of ten per cent for Canadian grocery products manufacturers using uniform pricing. This is a significant expense item, particularly considering the relatively low net profit margin in this industry,³⁸ and one which could be expected to affect locational patterns.

³³Ibid., p. 596.

³⁴National Commission, op. cit., p. 142.

³⁵Ibid., p. 138.

³⁶Ibid., pp. 178 and 184.

³⁷Ibid., pp. 6-8.

³⁸Bingham, op. cit., p. 596.

Price Elasticity Of Demand

Price elasticity of demand is influenced largely by two closely related factors--the availability of substitutes and the ability of the seller to differentiate his product. Because new grocery products are continually being placed on the market, the number of substitutes for the products of most manufacturers in this field is numerous, which certainly tends to increase the price elasticity of demand.

One of the most important methods of differentiating a grocery product is by advertising it to the ultimate consumer. Because of the large number of substitute products, a manufacturer's message is often not implanted very firmly in the mind of a potential customer. Compounding this problem of differentiation is the typically smaller size of Canadian grocery products manufacturers, as compared to similar firms in the United States, which means fewer dollars for advertising. This advertising must still cover a large geographic area resulting in a relatively low degree of saturation and a consequent increase in the price elasticity of demand.

It would appear, even though the industry demand curve may be price inelastic,³⁹ the firms in the industry would, in the main, have price elastic demand curves.

Raw Materials And Production Costs

In the absence of any information concerning raw materials and

³⁹ National Commission, op. cit., p. 16.

production costs for the Canadian grocery products manufacturing industry, it was assumed these costs (excluding raw materials freight costs), for a given level of production, were not significantly different among alternate sites. This assumption limits any locational effects, due to raw materials and productions costs, to those caused by the freight costs on raw materials. For industries, such as sugar beet refining and fruit and vegetable processing, where transportation costs are high relative to the value of the raw material being transported, there would be a definite locational pull towards the raw material site. In industries where raw materials freight costs are not a significant proportion of a firm's cost structure, production locations would be pulled towards the markets.

(ii) Location Patterns

With this general discussion on locational factors as background, the effects on location, of either a uniform or f.o.b. pricing policy, can be assessed.

Under uniform pricing, a manufacturer desiring national distribution will prefer to locate in Ontario to be near raw materials and also at the heart of the Canadian market. This location will minimize his transportation costs, given a one-plant operation, as the collecting of phantom freight from the nearby concentrated markets of Ontario and Quebec will offset the high freight costs of reaching more distant provinces. Although the product freight costs are relatively high and economies of scale (at least in production) are low, the Canadian

manufacturer, unlike his United States counterpart, has little incentive to decentralize, i.e., become a multi-plant operation, due to the concentration and small size of the Canadian market. Certainly there are population concentrations in the United States but nothing to equal the sixty-three per cent found in Ontario and Quebec. Also, the much greater population of the United States (ten times that of Canada) makes decentralization more economical in that country. Significant freight savings more than offset any possible losses in production economies of scale.

Uniform pricing would consequently lead to a concentration of firms in the province of Ontario, each locating at its least-cost site for serving the whole Canadian market.

With f.o.b. pricing, a firm is not able to collect phantom freight to subsidize its shipments to distant markets. Given the conditions discussed earlier--high product freight costs relative to the net profit margin, price elasticity of demand, and relatively low production economies of scale--an f.o.b. pricer in the grocery products manufacturing industry will not be price competitive in distant markets, unless he decentralizes production.

Concerning production sites, the heavily concentrated Eastern markets of Ontario and Quebec would again be favored. A location in either province should make it possible to serve the whole Eastern market--Ontario, Quebec, and the Maritimes. Although the tendency to decentralize within the Eastern market itself would be higher under f.o.b., than under uniform pricing, it is likely that the relatively

short freight hauls would keep freight costs low enough to prevent decentralization.

As far as the Western Canadian market is concerned, and particularly British Columbia and Alberta, an f.o.b. pricer located in the East would incur high enough freight costs to price himself out of this market. As a result, an opportunity for production facilities to be established in British Columbia to serve the far western market would arise.

In conclusion, it would appear, largely because of the size and concentration of the Canadian market, there would be, under uniform pricing, a concentration of grocery products manufacturers in Ontario with little incentive for spatial decentralization of production facilities. With f.o.b. pricing, there would still be a tendency for centralization of production in Ontario or Quebec, because of market conditions. There would also be, due to the influence of freight costs, an incentive to decentralize to the extent of establishing production facilities in British Columbia, which could be used to serve British Columbia and possibly much of the Prairies.

These general conclusions on location patterns are comparable to those of Greenhut, who says uniform pricing "makes location depend essentially on costs. . . . In practice, firms tend to concentrate at places where population is centered and, indeed, will locate near the center of the whole market, provided the production costs there are satisfactory."⁴⁰

⁴⁰Greenhut 1963, op. cit., pp. 186-187.

When there are heterogeneous products within an industry, Greenhut explains the reason for the concentration of firms as follows:

. . . we find a smaller probability that any given firm . . . producing a substitute product will locate symmetrically (disperse) with its rivals, because the custom formed by differentiating a product encourages greater independence of action and increases behavioral uncertainty. These conditions add up to a smaller likelihood of heterogeneous (as compared to homogeneous) firms pursuing quasi-monopolistic location policies with respect to each other.⁴¹

Under f.o.b. pricing and heterogeneous goods, the freight cost considerations would likely more than overcome any behavioral uncertainty and, in Canada, lead to the decentralization of production facilities into British Columbia.

D. Effects On Revenues, Costs And Profits

This discussion will attempt to draw some tentative conclusions concerning firm and industry profit levels under f.o.b. and uniform pricing.

A firm's profit is the difference between its revenues and expenses. The chief determinants of revenue are sales in units and price per unit, while the major expense items are raw materials costs (including freight), processing costs, selling expenses, and freight costs on finished goods. Each of these factors will be studied in the following paragraphs.

⁴¹Ibid., p. 180.

(i) On Revenues

Under the assumption of a price inelastic total industry demand curve, the average unit sales per firm will depend on the number of firms in an industry. Because of the oligopolistic nature of the grocery products manufacturing industry,⁴² and its relative lack of production economies of scale,⁴³ it is highly unlikely that the number of firms locating in Ontario or Quebec, under either system of pricing, would differ. Since f.o.b. pricing also leads to the establishment of firms (or plants) in British Columbia, the total number of firms (or plants) in an industry would be higher with this form of pricing than with uniform pricing. The result would be lower average unit sales per firm (or plant) under f.o.b. pricing.

The average price level depends on both the degree of competition in the market and the costs (both production and marketing) of serving this market. Based on the discussion in subsection (ii) below, the assumption is made that no appreciable difference in average cost per unit would result under either type of pricing. If this is so, the average price level will be determined by the degree of competition in the market.

⁴²National Commission, op. cit., p. 16.

⁴³Significant economies of scale in production would likely lead to fewer firms being set up in the Eastern market under f.o.b. pricing, as these firms would have smaller sales volumes than uniform pricers due to the latter serving the whole of Canada from their eastern locations.

Given the same number of firms serving the eastern market under either system of pricing, the average price level per unit would also tend to be the same if competition is the major influencing factor. Concerning the far western market, its smaller size (about twenty per cent of the total Canadian population) means that it would likely be served by fewer firms if f.o.b., rather than uniform, pricing was adopted, since under the latter policy all the firms located in Ontario could also market in the West. This smaller number of competitors, protected by the high freight costs incurred by eastern firms, would tend to result in a higher per unit price level in the West under f.o.b. pricing. This higher price, in twenty per cent of the market, would cause the average price level per unit for the whole country to be somewhat higher if f.o.b., rather than uniform, pricing was used.

A higher average price level coupled with a relatively inelastic demand should result in greater industry total revenues under f.o.b. pricing. However, this will not likely be reflected in the average revenue per firm since, with f.o.b. pricing, the increased number of firms (or plants) in an industry will, in all likelihood, more than offset any revenue gains caused by higher prices. The result will be lower average revenues per firm with this form of pricing than with uniform pricing.

(ii) On Costs

Looking first at the raw materials cost, it is assumed, because of good supply sources in Ontario, Quebec and British Columbia, a

producer will be able to locate near his raw materials, if freight costs dictate it. This would tend to equalize the per unit raw materials costs under either geographic pricing policy and the only possible cost advantage would be due to quantity buying, which would favor uniform pricing because of the larger average size per firm (or plant) with this method of pricing.

The larger average unit sales per firm under uniform pricing would also lead to economies of scale in production although, as pointed out earlier, these may not be too significant for many grocery products manufacturers.

When considering promotional expenses, it must be remembered that the f.o.b. pricer, on the average, is faced by a smaller number of competitors than the uniform pricer, due to the lesser number of firms serving the western market under f.o.b. pricing. This would reduce the efforts which must be made to differentiate his product. Advertising would be less, but whether costs would be lower would depend on the level of local and regional rates as compared to national rates. Under either type of pricing, it is highly likely that a salesforce (either the manufacturer's own salesmen or some type of grocery products middleman, such as a broker) would be necessary. Economies of scale associated with administering a larger salesforce would benefit the uniform pricer while diseconomies would have the opposite effect.

Bingham pointed out a possibly significant cost element (although its impact, in dollar figures, was not given).

Simplicity of sales terms and administration, one of the great marketing advantages of uniform delivered pricing, would be replaced [under f.o.b. pricing] by a complex situation in which either buyers, sellers, or both would need to make freight calculations for each individual transaction. The efficiency of salesmen would be reduced; unit costs of sales would be increased.⁴⁴

Finally, in regard to product freight costs, the f.o.b. pricer incurs none of these as the buyer pays the total freight on his orders. The uniform pricer can accomplish the same thing by collecting sufficient phantom freight from his nearby customers to just offset the freight absorbed on sales to distant markets. Whether the phantom freight collected is typically equal to, more than, or less than the freight absorbed could not be ascertained. Given a highly competitive market situation, and no collusion by uniform pricers, it would seem reasonable to expect the freight absorbed to exceed the phantom freight collected which would result in higher costs with uniform, as compared to f.o.b., pricing.

As can be seen from the above discussion, both forms of pricing have advantages and disadvantages as far as their effect on the cost structure. In the absence of any literature discussing the relative importance of these various cost factors, it was not possible to conclude that one form of pricing results in lower costs per unit than does the other. Consequently, it was assumed that advantages under

⁴⁴Bingham, op. cit., p. 596.

each form of pricing are offset by the disadvantages, i.e., the average firm's cost per unit would be the same under either method of pricing.

(iii) On Firm And Industry Profits

To determine the pricing policy effects on firm and industry profits, a simple model, incorporating the above discussion on revenues and costs, was set up and is shown in Appendix B. The model indicates:

1. Higher industry total profits will result when f.o.b., rather than uniform, pricing is adopted.
2. No precise conclusion can be reached regarding the effects of the two geographic pricing policies on average profits per firm. Depending on the values for the following three variables, either method of pricing can be shown to lead to higher average profits per firm.
 - (a) The ratio of the average cost per unit to the average selling price per unit,
 - (b) The ratio of the per unit f.o.b. selling price in the western Canadian market to the per unit uniform selling price for the whole of Canada, and
 - (c) The ratio of the total number of grocery products manufacturers in Canada under f.o.b. pricing to the total number of manufacturers in the country, if a uniform pricing policy were to be adopted.

E. Effects On Social Costs

In this section, an attempt will be made to answer a number of questions concerning the possible social costs associated with uniform pricing, as compared to f.o.b. pricing.

What is the impact on social costs of the geographic location of industries under uniform pricing? As discussed earlier, under either f.o.b. or uniform pricing, there will be a heavy concentration of production facilities in the eastern market with Ontario being the favored location site. Also with f.o.b., but not uniform, pricing, firms will locate in British Columbia. Consequently, firms using uniform pricing in Canada would tend to locate at least-cost sites for the market as a whole, whereas firms using f.o.b. pricing would tend to locate at least-cost sites for the western and eastern market segments only. Which form of locational pattern is best for the Canadian economy is beyond this writer's ability to say. Certainly, an argument can be made for decentralization of production, in order to develop a more regionally sound economy, as long as this decentralization does not impose too high an economic cost on the country. Because of the importance to the economy of industry location patterns, one might also argue in favor of a great deal of public interest participation in these decisions.

What is the effect on competition of uniform pricing? Earlier discussion indicated whatever pricing policy is used will not likely significantly influence the number of firms in the eastern Canadian

market, so competition in this area will presumably not be affected. Since f.o.b. pricing will lead to fewer firms serving the western Canadian market, buyers there will be at a disadvantage, compared to their counterparts in the East, because of more limited competition. Consumers will be offered a smaller variety of products in the West under f.o.b. pricing. The two key assumptions underlying this discussion should be noted. First, no collusion exists under uniform pricing, and second, uniform pricers will be willing to market their products in western Canada. Should either one of these assumptions not be valid, then uniform pricing will not lead to increased competition.

How is the price level affected under either method of pricing? It was suggested earlier, the average price level in the East would be independent of pricing policy, while, in the West, prices would tend to be higher under f.o.b. pricing, reflecting the lesser amount of competition resulting from this pricing policy. In making this suggestion, the assumption is one of equal costs per unit under either method.

Does uniform pricing affect the size of the firm and, if so, is this good or bad? With this form of pricing, the average firm size would tend to be larger than with f.o.b. pricing. Size is not inherently bad unless it leads to collusion or produces unfair methods of competition. Where size leads to economies of scale in production and distribution, it would certainly be desirable from a social cost standpoint.

Is the discrimination against customers located close to the source of supply necessarily wrong? Under uniform, as opposed to f.o.b., pricing, customers near the producer, through paying phantom freight, subsidize those buyers located in the outlying market. Whether there is anything wrong in this is an arguable point. As Copeland says, "I know of no grounds, in fact or theory, by which the advantages of location are expected naturally to accrue to the buyer rather than the seller."⁴⁵

Finally, are unnecessary transportation costs incurred with uniform pricing? Higher total freight bills would tend to be the result under this pricing policy because the uniform pricer serves the whole Canadian market, whereas the f.o.b. pricer, because of some decentralization, ships to only a segment of the market. This will result in a disadvantage to society unless this greater total transport cost is offset by savings in other areas, such as production and marketing. What the net effect is for the Canadian grocery products manufacturers could not be determined due to the unavailability of pertinent data.

In summary, both uniform and f.o.b. pricing have social cost advantages and disadvantages. The evidence so far available, however, does not permit the conclusion to be drawn that one pricing method is more advantageous than the other, from a social cost standpoint.

⁴⁵Melvin T. Copeland, "Should Delivered Price Quotations Be Restored?" Commercial and Financial Chronicle, November 4, 1948, p. 1864.

CHAPTER III

FIELD SURVEY METHODOLOGY

1. INDUSTRIES SURVEYED

The Canadian grocery products manufacturing industry was selected as the major one to be surveyed for two reasons:

1. The literature suggested it was an industry in which uniform pricing was widely used and a variety of other types of geographic pricing could also be found.

Concerning the use of uniform pricing in this industry, Bingham stated it was the "typical and characteristic mode of pricing."¹ Cassady, writing more recently, did not indicate which form of geographic pricing was most important. He did, however, point out, with examples, the various forms of geographic pricing, including uniform pricing, used in the industry.

Goods in this category [foodstuffs] are supplied by the producers, manufacturers, or processors (a) on a delivered price ("postage stamp") basis (e.g. cereal products), (b) at uniform prices within certain specified geographical zones (e.g. certain canned vegetables), (c) at basing point quotations plus freight (e.g. sugar and salt), or, (d) f.o.b. the supplier's shipping point (e.g. canned peaches).²

¹Bingham, op. cit., p. 595.

²Ralph Cassady, Competition and Price Making in Food Retailing: The Anatomy of Supermarket Operations (New York: The Ronald Press Company, 1962), pp. 8-9.

2. Discussion with members of the Grocery Products Manufacturers of Canada, the industry association, indicated uniform pricing was an important method of pricing in this industry, having been in use by the major suppliers for at least the last ten years. It was suggested that many manufacturers, when they expanded from a local or regional market to a national one, went to a uniform pricing policy in place of the pricing policy (often non-freight absorbing) used to serve the smaller market.

The leading retail chain food stores in Canada were also surveyed, in order to determine whether or not private branders' pricing policies, and their possible effects, were similar to those found in the survey of grocery products manufacturers.

2. QUESTIONNAIRE DESIGN

Since cost factors made it impossible to use either the telephone or personal interview methods of survey to reach the industries chosen, a mail questionnaire had to be employed. To ensure as high a rate of response as possible, it was decided to keep the number of questions to a minimum. This was accomplished by asking respondents to answer the questionnaire on the basis of only one product, which was called the "primary product".

For grocery products manufacturers, the following definition of "primary product" was used:

By "product", this study refers to either an individual brand or a single item in a family

brand. In either case, each "product" should include only one size. For example, if an individual brand is marketed in five sizes, this would be five "products" for the purposes of this study. "Products" should also be restricted to grocery items, that is, items primarily marketed through grocery outlets.

By "primary", this study refers to the "product" having the highest dollar sales in 1965, among those "products" which meet both of the following criteria.

1. It is currently being marketed in at least two Canadian regions, and
2. It is currently being marketed in more Canadian regions than it was during its first year on the market in this country.³ Thus, any "products" which were marketed nationally during the first year would not qualify for the "primary" designation.

For chain store food retailers, "primary product" was defined as follows:

By "product", this study refers to either a private (retailer's) individual brand or a single item in a private family brand. In either case, each "product" should include only one size. For example, if a private individual brand is marketed in five sizes,

³Twenty-three (out of sixty-five) respondents were unable to adhere to, or chose to ignore, this restriction and submitted data for "primary products" which were originally and currently marketed in the same regions. On the basis of the explanations provided, it appears most of these companies did not have products which had experienced a market region increase, i.e., all their products are now marketed in the same number of regions as when they first came onto the market. Rather than not answering the questionnaire, the respondents chose to ignore the restriction, thereby providing the study with much more information than would have been received had the market region increase constraint been adhered to rigidly.

this would be five "products" for the purposes of this study.

By "primary", this study refers to the "product" which, among those products currently being marketed in at least two regions, had the highest dollar sales in 1965.

Two very similar questionnaires were designed--one for grocery products manufacturers and the other for chain store food retailers. In both questionnaires the objective was to obtain some history of the marketing areas, pricing policies, and locations of production of a firm's "primary product". The questions were designed to find out when and why changes took place, so as to reveal as much information as possible about pricing policies and their possible effects.

The major differences in the questionnaires were (1) in the definition of "primary product" and (2) in the pricing terms used. To determine whether grocery products manufacturers, when they expanded their marketing areas, also changed their geographic pricing policy, it was necessary to have as part of the definition of the "primary product" that it be a product which is currently being marketed in more regions than when it was first introduced onto the market.⁴ This restriction was omitted in the survey of the chain store food retailers because the pretest indicated that chain food stores, when introducing a private brand, usually place it in all their outlets initially. If the restriction concerning expanded market areas had not been removed,

⁴As pointed out in footnote 3, this part of the definition was not adhered to by a significant number of respondents.

few private brands would have been eligible for inclusion in the survey.

3. PRETEST

To allow for personal interviews, pretesting of the two questionnaires, in June, 1966, had to be conducted in the northeastern United States, since this was the researcher's temporary base of operations during this phase of the study. The grocery products manufacturers questionnaire was mailed to three large firms in the New England area; the chain store food retailers questionnaire was sent to a major firm in the same area. Each pretester was asked to complete the questionnaire and note any difficulties he had. Based on the subsequent personal interviews, which provided much valuable information, the questionnaires were revised.

The two questionnaires, in final form, are included as Appendix A.

4. THE SURVEY

In the first week of July, 1966, one hundred seventy questionnaires were mailed to firms in Canada. One hundred sixty-four went to grocery products manufacturers; the remaining six were sent to the leading chain store food retailers.

A source, which must remain anonymous, provided the mailing list for the survey of grocery products manufacturers. A careful check of this list indicated it included all of the major Canadian manufacturers in this industry.

The mailing list for the retail private branders was based on the researcher's personal knowledge of the Canadian industry, as well as correspondence with people employed by the leading chain store food retailers.

On July 20, 1966, an individually addressed and signed mimeographed follow-up letter, along with another copy of the questionnaire, was sent to the ninety-nine firms (ninety-six grocery products manufacturers and three private branders) which had not as yet replied.

5. LIMITATIONS OF THE FIELD SURVEY

A. Due To The Use Of Mail Questionnaires

As is the case with most, if not all, mail questionnaires, there were the problems of (1) non-response and (2) poor communication by both the questioner (due to poorly defined terms and poorly worded questions) and the respondent (as reflected in inadequately explained answers).

The rate of response may have been reduced due to the questionnaires being sent out in July, normally a peak holiday time, and respondents being asked to reply in less than three weeks. To minimize non-response, the following steps were taken:

1. The questionnaire was kept as short and as straight-forward as possible.
2. If the respondent desired, he could answer it anonymously.
3. The definition of "primary product" was made as compatible as possible with a company's accounting records.

4. Individually typed and signed covering letters were used.
5. A deadline for returned questionnaires was set in the covering letter and a follow-up letter to the non-respondents was sent out just before the deadline was reached.

To minimize the possibility of poor communication, the definitions and questions were reviewed carefully with the pretesters in order to remove any ambiguities. As well, letters of explanation were sent out to the several survey respondents who indicated they were having problems with the questionnaire.

In spite of these precautions, there were some respondents who misinterpreted the questions on pricing policy changes and location of production facilities. However, none of these misinterpretations had any significant effect on the results.

There was one other possible problem in interpretation which could have occurred. Both f.o.b. buyer's warehouse with freight absorption and uniform pricing were listed among the alternative pricing policies. These were defined, it was hoped, in such a way as to be mutually exclusive. However, it is possible a firm may use an f.o.b. buyer's warehouse with freight absorption pricing policy for the purpose of having the same selling price throughout the entire market. The respondent, if he did not read the pricing term definitions carefully enough, may have checked off the f.o.b. policy rather than uniform pricing. Since there was no way of knowing whether or not this had occurred, it was assumed the respondents had correctly answered the questions concerning the pricing policy used.

People replying to a mail questionnaire tend to make their answers as brief as possible. Several questions in this survey required a "why" answer and the inadequate explanations provided by many respondents did limit the usefulness of the data received. As about one-half of the respondents indicated a willingness to discuss the questionnaire in a personal interview, more information could be obtained, should this be necessary for future study.

B. Due To The Survey Design

Limitations peculiar only to this study arose mainly because of the decision to gather data for only one product per respondent (in the hopes of increasing the response rate), and the resulting need to define this product. To determine whether geographic pricing policy changes accompanied market area expansions, it was necessary to define the "primary product" as one which is currently marketed in more regions than when it was introduced. Even though many respondents chose to ignore this restriction (as discussed earlier), there may still have been a number of firms which did not reply because all their products failed to meet this requirement.

In responding to the questionnaire, a firm was not required to choose a product which was representative of its complete product line. Consequently, conclusions drawn from the data could only be stated in terms of "primary products" and not in terms of the industry in total. The conclusions reached may apply to the whole grocery

products manufacturing industry but there was no way this could be verified on the basis of the survey results.

One of the major objectives of this study was to ascertain whether the geographic pricing policy used had any effect on either the markets served or the location of production facilities. To accomplish this, it was decided to ask each respondent to provide information on any changes made in these decision variables during the life of the "primary product". In retrospect, this decision did not prove to be a wise one as very few pricing policy changes were reported. Whether this was due to the problem of recall could not be determined. Since many of the products had been on the market for a number of years,⁵ it is quite possible either the necessary historical data was not available or the respondents were unwilling to take the time to ferret out the information.

Two other limitations of the field survey design should be noted. The pretest was conducted in the United States. It is possible that changes made, as a result of suggestions received from the American firms, may have altered the clarity of the questionnaires as far as Canadian respondents were concerned.

The grocery products manufacturing industry is really a collection of a number of industries in both the food and nonfood fields. Surveying such a wide spectrum of products (literally adding together "apples

⁵The median life for all products was seventeen years.

and oranges") does make it more difficult to draw meaningful conclusions from the data collected.

CHAPTER IV

FIELD SURVEY FINDINGS

In this chapter the results of the survey of Canadian grocery products manufacturers and retail food store private branders will be presented, analyzed, and a few tentative conclusions drawn. Where possible, the field survey results will be related to the conclusions reached in the Chapter II theoretical analysis. Also, the Chapter I hypotheses will be tested.

In the analysis of the field survey findings, four variables--products, market areas, geographic pricing policies, and locations of production--are studied. Because it was assumed the respondents did not represent a random sampling of the population, no statistical analysis (in the true sense) could be undertaken.

1. NUMBER OF REPLIES

One hundred sixty-four questionnaires were sent out to grocery products manufacturers in Canada. Some form of reply was received from one hundred twenty-six manufacturers (77%), leaving thirty-eight from whom nothing was heard. Of the one hundred twenty-six replies, sixty-one did not answer the questionnaire, due to such reasons as:

1. Unwillingness to divulge the information.
2. Lack of time in which to fill out the questionnaire.
3. Information not readily available.
4. Products only marketed in one region so do not meet the

"primary product" definition.

5. Company has been taken over by another one.
6. Questionnaire not applicable to company's product mix.
7. Man who knows the information away on holidays.

Of the sixty-five questionnaires which were submitted, seven did not contain answers to all questions. Consequently, whenever the totals in a table should add up to sixty-five but do not, it is due to the lack of complete answering by some respondents.

Thirty-four of the sixty-five questionnaire respondents indicated a willingness to discuss the questionnaire at greater length in a personal interview.

Six questionnaires were sent out to retail food private branders. Among these six firms, there were three refusals, one non-reply, and two completed questionnaires. Both questionnaire respondents were willing to discuss the questionnaire in a personal interview. Because the refusers and the non-respondent are large concerns, only a general analysis of the private brand data could be attempted.

2. ANALYSIS OF THE REPLIES FROM THE GROCERY PRODUCTS MANUFACTURERS

This section is divided into six parts. In the first four parts (A-D), each of the four variables in the study--products, market areas, geographic pricing policies, and locations of production--is studied separately. Part E attempts to uncover any interrelationships between variables by looking at them two at a time. To reduce the possible confusion caused by the many analyses attempted in parts A-E, a summary

listing the major findings is included as part F of this section.

A. Product Information

To obtain some information on the characteristics of the "primary product" used by each respondent when completing the questionnaire, the answers to questions 2 (age of the product), and 11 (sales ranking of the "primary product" in comparison to the respondent's other products) were tabulated and are shown in Tables 1 and 2.

TABLE 1

AGE OF THE "PRIMARY PRODUCTS"

Product Age (Years)	Number of "Primary Products"
0 - 4	9
5 - 9	13
10 - 14	6
15 - 19	7
20 - 29	6
30 - 39	8
40 - 49	3
50 - 59	3
60 - 69	4
70 or more	3
	<hr/>
	TOTAL 62

It will be pointed out, in part C of this section, that the survey uncovered few changes in pricing policy over time. As Table 1 indicates, this was not due to the "primary products" only being on the market for a short time. With a median life of seventeen years for these products, it might have been expected that more changes in pricing policy would have been reported.

TABLE 2

"PRIMARY PRODUCT'S" SALES RANKING IN COMPARISON TO THE
RESPONDENT'S OTHER PRODUCTS

Sales Rank of "Primary Product"	Number of "Primary Products"
1st - 3rd	46
4th - 10th	7
Lower than 10th	7
	<hr/>
	TOTAL 60

Table 2 shows that the respondents, for the most part, chose one of their leading products, from a sales standpoint, as the "primary product". Thus, one cannot discredit the data received by saying it does not adequately represent leading, high-volume products.

Thirty-two respondents were willing to disclose the product they had named as their "primary product". Included were such food items as canned vegetables, canned juices, canned meat products, canned and frozen seafood products, packaged fresh vegetables, pet food, cereal, cookies, crackers, bread, soup, soft drinks, chocolate bars, sugar, salt, flour, corn syrup, margarine, and shortening and such nonfood products as light bulbs, floor wax, detergents, bleach and shoe polish.

B. Market Area Information

Current Regions¹ of Marketing

As can be seen from Table 3, the majority of "primary products"

¹For this study, Canada was divided into the following five regions--British Columbia, Prairies (Alberta, Saskatchewan, Manitoba, and Ontario from the Manitoba border to the Lakehead), Ontario (all of Ontario except that west of the Lakehead), Quebec, and the Maritimes.

(forty-eight out of sixty-five) are nationally distributed.² Eight firms also reported that their "primary product" was marketed, to some extent, outside of Canada.

TABLE 3

CANADIAN REGIONS IN WHICH THE "PRIMARY PRODUCTS"
ARE CURRENTLY BEING MARKETED

Canadian Regions in which "Primary Product" Marketed	Number of "Primary Products"	
<hr/>		
<u>Two Regions</u>		
British Columbia, Prairies	3	
British Columbia, Ontario	1	
Ontario, Quebec	2	
Quebec, Maritimes	1	
	—	
Sub-Total		7
 <u>Three Regions</u>		
British Columbia, Ontario, Quebec	1	
Ontario, Quebec, Maritimes	5	
	—	
Sub-Total		6
 <u>Four Regions</u>		
All Regions Except Maritimes	2	
All Regions Except British Columbia	2	
	—	
Sub-Total		4
 <u>All Five Regions</u>		48
		—
TOTAL		65

²National distribution in this study refers to the marketing of the primary product in all five regions.

Historical Changes In Regions Of Marketing

Concerning market area changes over time, fifty-six of the sixty-five respondents were able to give both the original and current regions of marketing. Of these fifty-six, thirty-three had a change in marketing regions while twenty-three did not. Eighteen of these twenty-three had national distribution on their "primary product" to begin with, two marketed in three regions over the whole life of the product, while the remaining three marketed originally and currently in only two regions.

Of the thirty-three respondents, whose "primary product" had market region changes over time, one did not read the questionnaire notes of explanation carefully enough as he reported on a "primary product" which had experienced a decrease (rather than an increase, as requested) in the regions of marketing. The market region increases for the remaining thirty-two "primary products" are shown in Table 4.

The data shows that most firms (twenty-six out of thirty-two) which have expanded their market areas have done so by at least two regions.³ The majority of these major geographic expansions were done on a step-by-step basis with only four firms, out of the twenty-six, going from their original to their current market regions in one step.

³For all thirty-two products, the average expansion in market areas was 2.6 regions.

TABLE 4

ORIGINAL AND CURRENT MARKETING REGIONS FOR THOSE "PRIMARY PRODUCTS" WHOSE MARKET REGIONS INCREASED OVER TIME

Regions In Which "Primary Product" Marketed Originally		Increase In Regions Of Marketing	Number of "Primary Products" For Which Increase Reported
<u>One Region</u>			
British Columbia	British Columbia, Prairies	1	1
Ontario	Ontario, British Columbia	1	1
Ontario	Ontario, British Columbia, Quebec	2	1
Ontario	Ontario, Quebec, Maritimes	2	1
Ontario	All Regions Except British Columbia	3	1
Prairies	All Five Regions	4	1
Ontario	All Five Regions	4	4
Quebec	All Five Regions	4	3
	Sub-Total		13
<u>Two Regions</u>			
Ontario, Quebec	All Regions Except Maritimes	2	1
British Columbia, Ontario	All Five Regions	3	1
Prairies, Ontario	All Five Regions	3	2
Ontario, Quebec	All Five Regions	3	3
Ontario, Maritimes	All Five Regions	3	1
	Sub-Total		8
<u>Three Regions</u>			
British Columbia, Prairies, Maritimes	All Five Regions	2	1
British Columbia, Prairies, Ontario	All Five Regions	2	2
British Columbia, Ontario, Quebec	All Five Regions	2	1
Prairies, Ontario, Quebec	All Five Regions	2	2
Ontario, Quebec, Maritimes	All Five Regions	2	1
	Sub-Total		7
<u>Four Regions</u>			
All Regions Except Maritimes	All Five Regions	1	4
	TOTAL		32

C. Pricing Information

Current Geographic Pricing Policies

Table 5 presents the various types of geographic pricing policies currently being used on the sixty-five "primary products" for which information was submitted by the grocery products manufacturers. For twelve of these "primary products", more than one pricing policy was reported. So that each product was treated equally, fractional weights were employed for these multiple pricing policy cases. For example, if a firm used two geographic pricing policies on its "primary product", each of these policies was weighted one-half.

TABLE 5

GEOGRAPHIC PRICING POLICIES CURRENTLY BEING USED ON THE "PRIMARY PRODUCTS"

Current Geographic Pricing Policy	Number of "Primary Products"
F.O.B. factory	12
F.O.B. buyer's warehouse with no freight absorption	14
F.O.B. buyer's warehouse with freight absorption	12
Zone	9
Uniform	16
Basing point	2
	<hr/>
	TOTAL 65

As can be seen from the Table, five geographic pricing policies are widely used. On the basis of this study, one would have to disagree with Bingham and conclude that, at least for the Canadian grocery

products manufacturing industry, uniform pricing is not the "typical and characteristic mode of pricing."⁴ Although it is used most often by the survey respondents, its use is not much greater than that of four other geographic pricing policies also used widely in this industry.

Table 5 also shows that sixty per cent of the "primary products" in the survey are currently priced by a method involving freight absorption.

Historical Changes In Geographic Pricing Policies

The survey uncovered very little in the way of changes, over time, in the geographic pricing policies being used on the "primary products". As pointed out in part A, this is certainly not due to the "primary products" having only been on the market for such a short period of time there had been no chance for a pricing change. Rather, the lack of data must be attributed to (1) the problem of recall or (2) the possibility that Canadian grocery products manufacturers stay with the same geographic pricing policy for many years.

Of the sixty questionnaires which gave both the current pricing policy and the pricing policy used when the product was first introduced, only eight had a change in geographic pricing policy over the life of the product. In other words, fifty-two out of sixty respondents are

⁴Bingham, op. cit., p. 595.

currently using the same pricing policy as was used when the "primary product" first came onto the market. Table 6 gives the eight changes and the reasons (as stated by the respondents) for each change.

The only possible trend discernible from Table 6, and its significance must be strongly questioned because of the small number of respondents reporting change, could be a slight intra-product shift from non-freight absorbing geographic pricing policies to those which are freight absorbing. This shift was evident for four of the "primary products" in Table 6 while for only one product did at least a partial shift in the opposite direction occur. If there has been an intra-product trend, it certainly has not occurred in recent years since, for seven of the eight products in Table 6, the date of the pricing policy change was indicated and, in all cases, the shift took place prior to 1957.

The above attempt to isolate possible trends in geographic pricing policies looked only at the historical pricing changes for each "primary product", i.e., it was an intra-product approach. Since this approach did not uncover any truly significant trends, it was decided to analyze the data in a different way in an attempt to uncover possible trends. This second approach (to be called intra-industry) looks at only the original pricing policy used in order to determine whether or not newer products on the market tend to be originally priced using different geographic pricing policies than were used on products introduced a number of years ago. The procedure employed in

TABLE 6

HISTORICAL CHANGES IN THE GEOGRAPHIC PRICING POLICIES USED ON THE "PRIMARY PRODUCTS"
AND REASONS FOR THE CHANGES

Original Geographic Pricing Policy	Current Geographic Pricing Policy or Policies	Number of "Primary Products" for which Change Reported	Reasons for the Changes
F.O.B. factory	F.O.B. buyer's warehouse with no freight absorption	2	Customer convenience. Competition also made the same pricing policy change
F.O.B. factory	F.O.B. factory and F.O.B. buyer's warehouse with freight absorption	1	Some absorption of air freight in sales to distant customers to encourage use of this method of transportation since the product is perishable
F.O.B. factory	Uniform	2	Market expansion and also to permit advertising of one price over the whole market
F.O.B. buyer's warehouse with no freight absorption	F.O.B. buyer's warehouse with no freight absorption and zone	1	Expansion of market from one region to three
F.O.B. buyer's warehouse with freight absorption	F.O.B. factory, F.O.B. buyer's warehouse with freight absorption and zone	1	No reason given
Zone	Uniform	1	Commenced domestic production
		—	
	TOTAL	8	

this intra-industry approach was as follows:

1. The sixty "primary products", for which the original geographic pricing policy was indicated, were arrayed, from highest to lowest, according to the number of years each product had been on the market.
2. Opposite each item in the above array was shown the original geographic pricing policy used on the product.
3. The median⁵ of this chronological list was calculated.
4. The number of times a particular pricing policy was used as the original pricing policy on products which have been on the market longer than the median number of years and the number of times it was used as the original pricing policy on products which have been on the market less than the median number of years were determined. For example, f.o.b. factory pricing was used as the original form of geographic pricing on sixteen "primary products". In eleven of these cases, the product had been on the market longer than the median life of all products in the study, while, in the other five cases, the product's life was less than the

⁵It could be argued that use of the third-quartile, rather than the median, would better isolate the pricing policies used on recently introduced products. Utilizing the third quartile does have the disadvantage that, since only fifteen, instead of thirty, products would be shown in the second column in Table 7, percentage comparisons would tend to be less reliable. It should be noted that an analysis using the third-quartile, instead of the median, was carried out and it produced conclusions similar to those drawn from Table 7.

median. The breakdown for all geographic pricing policies is given in Table 7.

TABLE 7

ORIGINAL GEOGRAPHIC PRICING POLICIES AS RELATED TO THE LENGTH OF TIME THE "PRIMARY PRODUCTS" HAVE BEEN ON THE MARKET

Original Geographic Pricing Policy	Number of "Primary Products" Having a Market Life Which, In Terms of the Median Life For All Products, Was	
	Longer	Shorter
F.O.B. factory	11	5
F.O.B. buyer's warehouse with no freight absorption	6	6
F.O.B. buyer's warehouse with freight absorption	4	7
Zone	2	6
Uniform	5	6
Basing point	2	
	<hr/>	<hr/>
	TOTAL 30	30

Of the twenty-eight products priced originally using non-freight absorbing policies (i.e., f.o.b. factory and f.o.b. buyer's warehouse with no freight absorption), only eleven (39%) have been on the market less than the median number of years. In contrast, nineteen (59%) of the thirty-two products priced using freight absorbing policies have been on the market less than the median number of years. Thus, there would seem to be an intra-industry trend towards freight absorbing pricing policies, i.e., the more recently a product has come onto the market, the more likely it is to have been priced using a freight absorbing policy.

Even though there may have been a shift towards the use of freight absorbing, rather than non-freight absorbing, geographic pricing in the Canadian grocery products manufacturing industry, there is no indication, in either Tables 6 or 7, that this shift has specifically favored uniform pricing over other freight absorbing pricing policies.

D. Production Location Information

Current Locations Of Production

Table 8 gives a breakdown of the "primary products" according to the Canadian regions in which they are currently being produced.

The importance of Ontario as a production location is obvious from the data as forty-eight of the products are produced, in whole or in part, in that region. This would reflect the concentration of population in that part of Canada coupled with its importance as a raw materials area.

Also obvious is the majority (forty-nine out of sixty-four) of the "primary products" are currently being produced in only one Canadian region.

Historical Changes In Locations Of Production

Out of the sixty-one firms who reported both the original and current locations of production for their "primary product", there were twenty-three which changed production locations over the years.

Table 9 summarizes the data concerning these changes. The reasons

TABLE 8

CANADIAN REGIONS IN WHICH THE "PRIMARY PRODUCTS" ARE
CURRENTLY BEING PRODUCED

Regions of Current Production	Number of "Primary Products"
<u>One Region</u>	
British Columbia	5
Ontario	34
Quebec	7
Maritimes	3
	—
Sub-Total	49
<u>Two Regions</u>	
British Columbia, Prairies	1
British Columbia, Ontario	2
Prairies, Ontario	2
Ontario, Quebec	2
	—
Sub-Total	7
<u>Three Regions</u>	
Prairies, Ontario, Quebec	1
Prairies, Ontario, Maritimes	2
	—
Sub-Total	3
<u>Four Regions</u>	
All regions except British Columbia	1
<u>All Five Regions</u>	
	4
	—
TOTAL	64

shown for the changes are as provided by the respondents and, in several instances, are somewhat vague.

Of the twenty-one changes for which a reason was given, thirteen seem to be due to market or distribution factors, seven due to a desire

TABLE 9

HISTORICAL CHANGES IN THE PRODUCTION LOCATIONS USED FOR THE "PRIMARY PRODUCTS" AND REASONS FOR THE CHANGES

Type Of Production Location Change	Number Of "Primary Products" For Which Change Reported	Reasons For The Changes
<u>Addition Of New Region Or Regions Of Production</u>		
Originally produced in one region. Now also produced in one additional region.	4	1 - Market expansion 1 - To provide better service in new markets 1 - Production economies 1 - No reason given
Originally produced in one region. Now also produced in two additional regions.	3	1 - Market expansion 1 - Market expansion coupled with high product distribution costs 1 - No reason given
Originally produced in one region. Now also produced in three additional regions.	1	Market expansion and desire to reduce distribution costs
Originally produced in two regions. Now also produced in three additional regions.	2	1 - Market expansion 1 - Acquired plants and kept them operating to obtain a price and delivery advantage over competitors
Sub-Total	10	
<u>Change In Region Of Production</u>		
Originally produced in one region. Now only produced in one other region.	1	Product involved in acquisition by a company with unused production capacity in the same field

TABLE 9 (Continued)

Type Of Production Location Change	Number Of "Primary Products" For Which Change Reported	Reasons For The Changes
<u>Change In Region Of Production (Continued)</u>		
Originally produced in one region. Next, a shift to a new region. Now being produced only in the original region.	1	More efficient plant and labor supply was the reason for both moves.
Imported originally. Next, production in one Canadian region. Now only produced in one other Canadian region (Ontario).	1	Market became large enough to support Canadian plant. Region of production changed due to changing economic climate and importance of the Ontario market.
	—	
Sub-Total	3	
<u>No Change In Regions Of Production But Changes Within Regions</u>		
Always produced in one region but production location changed	3	1 - New plant 1 - Expanded facilities 1 - Market expanded so started own manufacturing instead of subcontracting it
Always produced in one region but added a second production location	2	1 - Market expansion 1 - Insufficient raw materials at original site to meet expanded market
Always produced in two regions but added a second production location in one region	1	To increase production capacity

TABLE 9 (Continued)

Type Of Production Location Change	Number Of "Primary Products" For Which Change Reported	Reasons For The Changes
<u>No Change In Regions Of Production But Changes Within Regions</u> (Continued)		
Always produced in two regions but reduced the production locations from twelve to six	1	Consolidation of production facilities to provide larger production volume for automation
	—	
Sub-Total	7	
<u>Other</u>		
Imported originally. Now produced at one Canadian plant.	3	3 - Market became large enough to support Canadian plant
	—	
TOTAL	23	

to obtain production economies, and one because of raw materials considerations.

Whether any of these production location changes can be associated with changes in the geographic pricing policy used for the "primary product" will be looked at in subsection (vi) of part E.

E. Interrelationships Between Variables

In subsections (i) - (vi) below, the field survey data is analyzed in an attempt to uncover possible interrelationships between any two of the four variables--products, markets, geographic pricing policies and locations of production.

(i) Between Products and Geographic Pricing Policies

Although only thirty-two respondents were willing to disclose the product which they had designated as their "primary product", there were an additional seventeen respondents who were willing to at least give their company name. Thus, there were forty-nine questionnaires which could be classified into the general groupings of food and non-food products for purposes of analysis in this subsection, as well as in subsections (ii) and (iii).

Table 10 gives the classification of food and nonfood "primary products" according to the geographic pricing policy currently being used for these products.

TABLE 10

GEOGRAPHIC PRICING POLICIES CURRENTLY BEING USED ON FOOD
AND NONFOOD "PRIMARY PRODUCTS"

Current Geographic Pricing Policy	Number of "Primary Products"	
	Food	Nonfood
F.O.B. factory	8	
F.O.B. buyer's warehouse with no freight absorption	9	2
F.O.B. buyer's warehouse with freight absorption	7	2
Zone	6	2
Uniform	8	3
Basing point	2	
	TOTALS	40
		9

The above data indicate that food producers use non-freight absorbing geographic pricing policies to a larger extent than do nonfood producers. Seventeen of forty food producers (43%) use a non-freight absorbing policy while only two of nine nonfood producers (22%) use such a policy.

An attempt was made to determine whether or not there was any relationship between the "primary product" (where it was indicated) and the pricing policy used. For food products, apple juice, margarine and cocoa are priced on the basis of non-freight absorption; malt syrup, cookies, crackers, cereal, pet food, and dry soup are priced using a freight-absorbing pricing policy; and soft drinks, sugar, salt, corn syrup, shortening, and canned soup are priced using both types of pricing policy. For nonfood products, shoe polish and light bulbs are

priced on the basis of non-freight absorption, while liquid detergents, liquid and paste wax, and liquid bleach are priced using a freight-absorbing policy.

The following are suggested as possible reasons for the various pricing policies:

1. For items such as cocoa, light bulbs, and shoe polish, the product freight costs per unit might be low enough to make freight absorption unnecessary to reach a wide market. Also, the number of well known substitute products might be so small price becomes a relatively minor marketing variable, thereby reducing the need to absorb freight.
2. For apple juice, the spatial separation of competitors, due to the limited number of good raw materials sites in Canada, may make non-freight absorbing pricing feasible if the firm does not wish to have national distribution.
3. For products such as cookies, crackers, cereal, dry soup, malt syrup, corn syrup, pet food, liquid detergents, waxes, and liquid bleach, product freight costs per unit may be large enough to necessitate the absorbing of freight in order to reach distant markets.
4. Products on which both freight and non-freight absorbing pricing policies are used may indicate an ability to capitalize on the home market, without absorbing freight, as well as a desire to invade more distant markets.

With regard to uniform pricing, it appears, from Table 10, this form of pricing is used to a somewhat greater extent on nonfood, rather than food, products. In terms of specific products, the following are the ones for which it was indicated uniform pricing is used: dry soup, cereals, crackers and floor wax.

Finally, an analysis of the relationship between the "primary product" (where it was indicated) and changes in pricing policy (see Table 6) uncovered nothing of significance.

(ii) Between Products and Markets

The breakdown of the forty-nine food and nonfood products as to the number of Canadian regions in which they are currently marketed is given in Table 11. As can be seen from the figures, all nonfood products are marketed nationally, while only sixty-three per cent of the food products have national distribution.

TABLE 11

NUMBER OF REGIONS IN WHICH FOOD AND NONFOOD "PRIMARY PRODUCTS" ARE CURRENTLY BEING MARKETED

Number of Regions in Which "Primary Product" Currently Marketed	Number of "Primary Products"	
	Food	Nonfood
2	6	
3	6	
4	3	
5	25	9
	TOTAL 40	9

A study of the relationship between "primary product" (where indicated) and market areas showed that canned fruit juice, sugar, and salt are products which have less than national distribution. These products would seem to be characterized by relatively high per unit product freight costs and, for sugar and possibly salt and canned fruit juice, a difficulty in differentiating the product sufficiently to command a price differential. These factors would make it impossible to compete in distant markets unless freight absorbing geographic pricing was used. Since this form of pricing was not always used on these products (see subsection (1) above), the less-than-national distribution is to be expected.

The analysis also showed that canned soup, chocolate bars, cereal, paste wax, shoe polish, and light bulbs were distributed nationally in their first year on the market. These products probably possess one or more of the following characteristics: relatively low per unit product freight costs, a high level of national advertising, and customary prices (at least for chocolate bars). These characteristics would encourage widespread marketing as soon as possible.

Liquid bleach, liquid wax, margarine, cookies, pet food, and liquid detergent are products whose market regions were expanded on a step-by-step basis. The first two products took about ten years to complete national distribution which, in the case of liquid bleach, was due to the necessity to decentralize production. Margarine took six years, while cookies, pet food, and liquid detergent completed their

step-by-step expansion to national distribution in only two years.

(iii) Between Products And Locations Of Production

Table 12 classifies the food and nonfood products according to the number of regions in which they are currently being produced. Since there was one food product for which no production location information was given, the total number of food products shown in Table 12 is one less than in Tables 10 and 11.

TABLE 12

NUMBER OF REGIONS IN WHICH FOOD AND NONFOOD "PRIMARY PRODUCTS" ARE CURRENTLY BEING PRODUCED

Number of Regions in Which "Primary Product" Currently Produced	Number of "Primary Products"	
	Food	Nonfood
1	28	7
2	6	
3	2	
4		1
5	3	1
	<hr/>	<hr/>
TOTALS	39	9

In terms of concentration of production, there does not appear to be any significant difference between food and nonfood products. The large majority of products in both categories are produced in only one region. Typical of these products are food items such as canned fruit juice, cereal, dry soup, and chocolate bars, and nonfood items such as light bulbs, shoe polish, liquid detergents, and wax.

Products which are produced in more than one region include canned soup, margarine, sugar, salt, flour, soft drinks, and liquid bleach. These items likely have both high raw materials freight costs and high product freight costs making decentralization of production necessary, if a firm wishes to market in a number of regions.

(iv) Between Production Locations And Markets

The relationship between current regions of production and current regions of marketing is shown in Table 13.

TABLE 13

CLASSIFICATION OF "PRIMARY PRODUCTS" BY NUMBER OF REGIONS
IN WHICH THE PRODUCTS ARE CURRENTLY PRODUCED AND MARKETED

Number of Regions in Which "Primary Product" Currently Produced	Number of Regions in Which "Primary Product" Currently Marketed			
	2	3	4	5
1	5	5	3	36
2	2	1		4
3			1	2
4				1
5				4
	—	—	—	—
TOTALS	7	6	4	47

Most firms (fifty-eight out of sixty-four) have a greater number of market regions than regions of production. At the extremes, there are thirty-six firms who market in all five regions and produce in only one while there are only four firms who market and produce in

all five regions. Of the thirty-six firms marketing nationally and producing in only one region, twenty-eight have production facilities in Ontario, five in Quebec, two in British Columbia, and one in the Maritimes. Two of the latter three locations would appear to be due to the pull of raw materials as the firms involved produce canned sea products.

Concerning the relationship between increases in the regions of marketing and production, there were thirty-two "primary products" which experienced an increase in the regions of marketing (see Table 4). In only seven of these cases was there also a decentralization in the regions of production. Since Table 9 shows there were ten primary products whose regions of production increased (i.e., a decentralization occurred), there were thus three products for which an expansion in the regions of production was not accompanied by an increase in the marketing regions.

(v) Between Geographic Pricing Policies And Markets

Table 14 classifies the "primary products" according to geographic pricing policies currently being used and the regions in which the products are currently marketed.

It would be expected the use of a non-freight absorbing pricing policy would restrict producers to something less than national distribution because their prices would not be competitive in the more distant markets. That this is not the case for the grocery products

TABLE 14

CLASSIFICATION OF "PRIMARY PRODUCTS" BY CURRENT GEOGRAPHIC PRICING POLICY USED AND NUMBER OF REGIONS IN WHICH THE PRODUCTS ARE CURRENTLY MARKETED

Current Geographic Pricing Policy	Number of Regions in Which "Primary Product" Currently Marketed			
	2	3	4	5
F.O.B. factory	1	3	2	6
F.O.B. buyer's warehouse with no freight absorption				14
F.O.B. buyer's warehouse with freight absorption	1	2	1	8
Zone	1			8
Uniform	3		1	12
Basing point	1	1		
	—	—	—	—
TOTALS	7	6	4	48

manufacturers surveyed in this study can be seen from Table 14. Twenty out of twenty-six (77%) of the products priced using non-freight absorbing policies were marketed nationally, while only twenty-eight out of thirty-nine (72%) of the products priced under freight absorption policies were sold in all five regions. This would seem to indicate one or more of the following possibilities:

1. Products for which a non-freight absorbing pricing policy is used are produced in more regions than are products priced under a freight absorbing policy. This would minimize freight costs on finished goods allowing wider distribution. More will be said about this possibility in subsection (vi).

2. Some firms are able to successfully differentiate their products, thereby reducing the importance of the price factor. This would make it possible to have more widespread distribution without freight absorption.
3. For some items, the product freight costs per unit are not high enough to necessitate the use of a freight-absorbing geographic pricing policy in order to achieve national distribution.

Looking at uniform pricing, one observes from Table 14 that its relationship to the number of regions in which the "primary product" is marketed does not differ significantly from that of the other pricing policies, in that seventy-five per cent of the products which are uniform priced have national distribution.

In regard to the relationship between changes in markets and changes in pricing policy, of the thirty-two respondents who reported an increase in the number of marketing regions over the life of the "primary product", only three also reported a corresponding change in pricing policy. Two of these shifts were from a non-freight absorbing pricing policy to one which was freight absorbing; the other was a change from f.o.b. factory pricing to f.o.b. buyer's warehouse with no freight absorption. It would appear firms are typically able to expand their market areas without having to change the geographic pricing policy used.

(vi) Between Geographic Pricing Policies And Production Locations

A breakdown of the "primary products" according to the geographic

pricing policy used and the number of regions of current production is provided in Table 15.

TABLE 15

CLASSIFICATION OF "PRIMARY PRODUCTS" BY CURRENT GEOGRAPHIC PRICING POLICY USED AND NUMBER OF REGIONS IN WHICH THE PRODUCTS ARE CURRENTLY PRODUCED

Current Geographic Pricing Policy	Number of Regions in Which "Primary Product" Currently Produced				
	1	2	3	4	5
F.O.B. factory	9	2	1		
F.O.B. buyer's warehouse with no freight absorption	9	3			2
F.O.B. buyer's warehouse with freight absorption	9		2		1
Zone	7	1			1
Uniform	14			1	
Basing point	1	1			
TOTALS	49	7	3	1	4

Eight out of twenty-six products (31%) priced under a non-freight absorbing policy are produced in more than one region while only seven out of thirty-eight products (18%) for which a freight absorbing policy is used are produced in more than one region. This supports the sub-section (v) suggestion that non-freight absorbing pricers would tend to decentralize production to reduce the effect of product freight costs.

Of the fifteen products which are uniform priced, there is only one (7%) that is produced in more than one region. This is at least

an indication that this form of pricing, more so than other types of freight absorbing pricing, enables a producer to minimize the number of production sites.

An attempt was made to see if there existed any relationship between changes in pricing policy and changes in location of production. In only two of the eight cases where a pricing policy change was reported was there any change in the place of production. One of these was a company which decided to expand its market from one to three regions. Because of the expansion, the firm decided to begin its own production, rather than subcontracting it, and to use zone pricing on top of the already existing f.o.b. buyer's warehouse with no freight absorption. In the second case the firm, because of an increasing market size, began domestic production (instead of importing the product) and changed from zone to uniform pricing. The field survey data thus did not demonstrate any significant relationship between changes in geographic pricing policy and changes in the location of production.

As a further attempt to uncover a relationship between pricing and location, the twenty-three changes in location of production (shown in Table 9) were studied to see what type of pricing policy was in effect when the location change was made. For two of these location changes, there was an accompanying change in the geographic pricing policy (see the discussion in the previous paragraph), leaving twenty-one products to be analyzed. For ten of these (48%), a non-freight absorbing pricing policy was used. This compares with a 36% usage of

non-freight absorbing pricing for those products for which there was no change in production location. This would indicate that products priced using a non-freight absorbing geographic pricing policy are more likely to have changes in their location of production than are products for which freight absorbing pricing is used.

F. Summary

Analysis of the questionnaires submitted by the Canadian grocery products manufacturers produced a number of interesting findings which were set out in parts A-E. For reader convenience, these findings are summarized below.

1. Almost three-quarters of the "primary products" are marketed nationally. A greater percentage of nonfood, as compared to food, items have national distribution.
2. When firms increase the number of regions in which they market their products, they typically expand step-by-step rather than all at once. Also, the market region increase is only rarely accompanied by a change in the geographic pricing policy used.
3. The number of regions in which a product is marketed does not appear to depend on whether a freight-absorbing or non-freight absorbing pricing policy is used. This is due, at least in part, to the fact that firms using a non-freight absorbing policy tend to produce in more regions than firms

using freight absorbing pricing, thus minimizing the effects of product freight costs.

4. Just over three-quarters of the "primary products" are produced in only one region, with Ontario, by far, the most important production location. The number of regions in which production takes place appears to be independent of whether it is a food or nonfood item.
5. Over three-fifths of the respondents had no change in the locations of production for their "primary product". For those firms which reported a change, it was, more often than not, related to market, rather than production or raw materials, considerations.
6. Five geographic pricing policies--f.o.b. factory, f.o.b. buyer's warehouse with no freight absorption, f.o.b. buyer's warehouse with freight absorption, zone and uniform--are used widely in the Canadian grocery products manufacturing industry.
7. Food, as compared to nonfood, producers use non-freight absorbing pricing policies more frequently.
8. The only seemingly significant geographic pricing policy trend is an intra-industry shift from non-freight to freight absorbing policies, i.e., the more recently a product has come onto the market, the more likely it is to have been priced using a freight absorbing policy.

9. There is no significant relationship between changes in geographic pricing policies and changes in the locations of production.
10. It would appear that products priced using a non-freight absorbing geographic pricing policy are more likely to have changes in their locations of production than are products for which freight absorbing pricing is used.
11. Looking specifically at uniform pricing, the following were the findings of the field survey:
 - (a) No trend towards the use of this form of pricing, in preference to other freight absorbing geographic pricing policies, was evident.
 - (b) Uniform pricing appears to be used to a somewhat greater extent on nonfood, rather than food, products.
 - (c) The relationship between uniform pricing and the number of regions in which the product is marketed is not significantly different from the similar relationship for other pricing policies.
 - (d) Products which are uniform priced are produced in a smaller number of regions than are products priced using some other geographic pricing policy.

3. ANALYSIS OF THE REPLIES FROM THE RETAIL CHAIN FOOD
STORE PRIVATE BRANDERS

As was mentioned in the first section of this chapter, only a

very general analysis of the private brand data can be made, due to the limited data received.

The interesting points drawn from the two completed questionnaires are:

1. Between the two companies the whole of Canada is covered, as far as market areas are concerned. The large company markets in all five Canadian regions but has low sales in the only two regions in which the smaller company operates.
2. The larger company's "primary product" has been on the market for seven years; the smaller firm's product only one year.
3. The smaller company's "primary product" was ranked in the top three according to sales. The larger company's "primary product", on the other hand, was only ranked from fourth to tenth. Private brand respondents were asked to pick as their "primary product" that product which had the highest dollar sales in 1965, among those products marketed in at least two regions. Thus, the only products which could have higher dollar sales than the "primary product" are those which are marketed in only one region. A ranking of fourth to tenth indicates that the respondent had at least three products which were marketed in only one region and also had higher dollar sales than the "primary product". This is somewhat surprising for two reasons. First, the pretest indicated retailers market their private brands in all their

outlets, so, given that the firm has outlets in more than one region, there should be no such things as a one-region product. Secondly, it seems somewhat unusual that products marketed in only one region would have higher dollar sales than the firm's "primary product" which is marketed in all five regions. One, of course, cannot rule out the possibility that the respondent misinterpreted the questionnaire instructions.

4. Neither "primary product" is being manufactured by the private brander. In the case of the company which markets in all five regions, its "primary product" is now, and always has been, produced at one location in Ontario, the region of its largest sales. The other company originally had its product manufactured in the United States but now also has it produced in one region in Canada due to cheaper prices.
5. Both "primary products" (one coffee, the other canned fruit juice) are, and always have been, priced on an individual store basis.
6. Both firms indicated that individual store pricing (i.e., a non-freight absorbing policy) is the typical pricing policy used on all their private brands. This would seem to reflect the greater importance of pricing as an active marketing variable for private brands, when compared to manufacturers' brands.

4. RELATIONSHIP BETWEEN THE THEORETICAL ANALYSIS AND THE FIELD SURVEY RESULTS

In this section the field survey results will be related, where possible, to the conclusions reached in the Chapter II theoretical analysis. Since the field survey was not designed to provide data concerning the effects of uniform pricing on either firm and industry profits or social costs, the survey results can only be related to the theoretical conclusions regarding the possible relationship between geographic pricing policy and location of production facilities.

One of the Chapter II conclusions was firms using non-freight absorbing geographic pricing policies would be forced, because of relatively high product freight costs, to market their products in a smaller number of regions per production location than would firms using uniform pricing. To test this conclusion, the data in Tables 14 and 15 were combined to produce a ratio of number of regions marketed in to number of regions produced in for each of products which were uniform priced and products which were priced using a non-freight absorbing policy. The fifteen uniform priced "primary products", for which complete information was available,⁶ are currently marketed in a total of sixty-five regions while being produced in only eighteen regions,

⁶In Table 14 there are sixteen "primary products" shown in the uniform pricing category while in Table 15 there are only fifteen. The difference is due to one respondent, whose "primary product" is marketed in all five Canadian regions, not providing production location data.

resulting in a market:production ratio of 3.6:1. The twenty-six "primary products", for which a non-freight absorbing pricing policy is used, are marketed in one hundred nineteen regions while being produced in forty-one regions, resulting in a ratio of 2.9:1. The lower ratio for non-freight absorbing pricing would tend to support the conclusion that, for the Canadian grocery products manufacturing industry, the market regions served by each producing point will be smaller if a non-freight absorbing geographic pricing policy is used rather than uniform pricing. Whether or not this reduced market coverage is due to relatively high product freight costs, as was concluded in Chapter II, could not be determined from the field survey results.

Concerning the possible relationship between pricing policy and the location of production facilities, the Chapter II conclusion was, largely because of the size and concentration of the Canadian market, there would be, under uniform pricing, a concentration of grocery products manufacturers in Ontario with little incentive for these firms to decentralize. With non-freight absorbing geographic pricing, the conclusion reached was, because of market concentration, there would still be a tendency for centralization of production in Ontario, and also possibly Quebec. However, there would also be, because of the influence of freight costs, an incentive to decentralize to the extent of establishing production facilities in British Columbia, which could be used to serve much of the Western Canadian market.

The field survey findings tend to substantiate these conclusions

re the location of production facilities under the two forms of pricing. There were eleven respondents who used uniform pricing as the original pricing policy⁷ on their "primary product". Of these eleven products, nine have always been produced in Ontario, one has always been produced in Quebec while the other was originally produced in Ontario but is now produced in three other Canadian regions. This exception to the conclusion of centralization of production under uniform pricing was due to a desire to reduce production costs and raw materials freight costs coupled with an availability of suitable raw materials in the new regions of production.

Concerning the relationship between production location and a non-freight absorbing pricing policy, Table 16 shows the initial production locations for the twenty-six "primary products" which were originally priced using a non-freight absorbing policy.

The field survey findings would appear to lend some weight to the conclusion that the use of non-freight absorbing pricing would lead to more decentralization of production in the grocery products manufacturing industry than would the use of uniform pricing. It is interesting to note, in line with the Chapter II conclusion, four "primary products" were produced in British Columbia under a non-freight

⁷The original, rather than current, pricing policy was used in that, if the location decision is related to the pricing policy adopted, it would be the original policy which would be the influencing factor.

absorbing pricing policy whereas, under uniform pricing, there were none.

TABLE 16

CLASSIFICATION OF THOSE "PRIMARY PRODUCTS" FOR WHICH
NON-FREIGHT ABSORBING PRICING WAS THE ORIGINAL
PRICING POLICY BY REGIONS IN WHICH THE PRODUCT
WAS ORIGINALLY PRODUCED

Regions of Original Production	Number of "Primary Products"	
One Region Only		
British Columbia	3	
Ontario	14	
Quebec	4	
Maritimes	1	
	<hr/>	
Sub-Total		22
Two Regions Only		
British Columbia and Ontario	1	
Ontario and Quebec	3	
	<hr/>	
Sub-Total		4
		<hr/>
TOTAL		26

For eight of the twenty-six "primary products" shown in Table 16, a significant market expansion, without a change in geographic pricing policy, was indicated during the life of the product. In line with the decentralization of production conclusion, for four of these products the regions of production were also increased. However, there were also four instances (all involving canned food products) where a significant market expansion was accomplished without either decentralizing production or changing from a non-freight absorbing to a freight

absorbing pricing policy. A possible explanation may be that, for canned food products, the freight costs on raw materials are possibly relatively higher than those on the finished product necessitating a production location near the source of raw materials. If there are only a limited number of good raw material sites in the country, this would lead to a centralization of production.

Since it was concluded in Chapter II a location in either Ontario or Quebec would serve the whole Eastern market, it may appear somewhat unusual to see, in Table 16, three "primary products" produced in both Ontario and Quebec and one produced in the Maritimes. This can be explained by looking at the "primary products" involved (where indicated). Sugar and bread were produced in both Ontario and Quebec. For bread, multiple locations are necessary to reach the market with a fresh product, while for sugar, the high freight costs on both raw materials and finished product would lead to a high degree of decentralization of production. The product produced in the Maritimes is canned seafood and it is likely the relatively high freight costs of raw materials, as compared to the finished product freight costs, would necessitate a production location near the raw materials.

To conclude this section, a note of caution must be raised. While the above data does indicate the possibility of a relationship or association (in the correlation sense) between geographic pricing policy and the location of production facilities, it must be stressed that no cause-and-effect relationship has been demonstrated. More will

be said about this in the next section under the discussion relating to Hypothesis 3.

5. TESTING OF THE STUDY'S HYPOTHESES

In this section, the field survey data will be used to test the four hypotheses formulated in Chapter I.

Hypothesis 1: Uniform pricing is an important geographic pricing policy in the Canadian grocery products manufacturing industry.

One-quarter of the survey respondents are currently using uniform pricing on their "primary products". Consequently, it must be concluded uniform pricing is an important geographic pricing policy in the Canadian grocery products manufacturing industry. However, although uniform pricing was the policy used most often by the survey respondents, four other geographic pricing policies--f.o.b. factory, f.o.b. buyer's warehouse with no freight absorption, f.o.b. buyer's warehouse with freight absorption, and zone--are also widely used in the industry, with anywhere from fourteen to twenty-two per cent of the "primary products" being priced using one of these four policies.

Hypothesis 2: In the Canadian grocery products manufacturing industry, there has been a trend towards greater use of uniform pricing.

Although there does seem to have been an industry trend away from non-freight absorbing pricing policies and towards freight absorbing

policies, this trend does not seem to be favoring uniform pricing over other freight absorbing pricing policies. Based on the survey data, this hypothesis must be rejected.

Hypothesis 3: The spatial distribution of production facilities in the Canadian grocery products manufacturing industry is significantly affected by the pricing policy used.

Although the discussion in the previous section indicated the possibility of an association between pricing policy and production location, it did not establish a causal relationship. In order to accept Hypothesis 3, the field survey results must indicate a cause-and-effect relationship between the pricing and location decisions. It would appear this relationship could be demonstrated in either of two ways.

Firstly, information could have been gathered from the respondents concerning the interrelationship between their original pricing policy decision for the "primary product" and the decision as to where to produce this product. In retrospect, the questionnaire used in this research study did not prove to be adequate for this purpose. Although information was gathered on the type of geographic pricing originally used for the "primary product" and on the original production location for this product, insufficient data was obtained to interrelate the two decision areas. For example, even though the respondents were asked to indicate the year the "primary product" was first placed on the market in Canada, they were not asked to give the date on which

their production facilities first came into use. Since the "primary product" did not have to be a company's first product on the market, it is quite possible the facilities were established for the production of products other than the "primary product" and then later utilized for the production of this product.

Even if the assumption were made that the production facilities were set up initially to produce the "primary product", i.e., they had not previously been used to produce other products, this would still not allow the establishment of a causal relationship since the field data did not indicate which decision--pricing or location--was made first or even whether there was any interdependency between the two decisions.

The second method for establishing the necessary causal relationship between pricing and location would be to analyze changes made in these decision areas over time. Data on these changes were obtained in the field survey. Only eight respondents reported a change over time in the pricing policy used on their "primary product" and in only two of these cases (too small a number to draw any conclusions) was there an accompanying change in the location of production.

Thirteen respondents reported a change over time in the regions in which the "primary product" was produced (Table 9). For only three of these location changes was there any explicit mention of price and, in all three cases, the price consideration was a desire to reduce product freight costs rather than a change in the geographic pricing

policy used. In fact, in none of the three instances did a change in pricing policy accompany the change in location.

As a result, no cause-and-effect relationship between the geographic pricing policy used and the location of production could be established on the basis of changes over time in these decision areas.

The field survey results certainly provide insufficient evidence on which to base an acceptance of the hypothesis that the spatial distribution of production facilities in the Canadian grocery products manufacturing industry is significantly affected by the pricing policy adopted. It could be argued, instead, that the concentration of production in Ontario reflects market and raw materials considerations rather than pricing policy decisions. This would be in line with Hoover⁸ and Ackley⁹ who feel that the pricing policy used is not normally a significant locational factor.

The question now is whether the lack of sufficient supporting evidence is reason enough to reject the hypothesis. Because the field survey results did not allow an analysis to be made of the relationship between the original geographic pricing policy adopted and the original location decision, it would seem most realistic to reserve judgment on Hypothesis 3, pending further study into the relationship between pricing and location decisions in the Canadian grocery products manufacturing industry.

⁸Hoover, op. cit., p. 57.

⁹Ackley, op. cit., p. 302.

Hypothesis 4: The geographic pricing policies used by Canadian retail food private branders, and the effect of these policies on production facility location, do not differ significantly from those found in the Canadian grocery products manufacturing industry.

Because only two of the six retail private branders surveyed chose to complete the questionnaire, not enough information was received to enable this hypothesis to be tested. About all that can be said is a non-freight absorbing pricing policy (i.e., individual store pricing) appears to be more widely used by private branders than by manufacturer's branders. This would reflect the greater need of private branders to have price flexibility, since price is probably the most important variable in the marketing mix for these products.

CHAPTER V

SUMMARY AND CONCLUSIONS

Chapter V (1) summarizes the findings of this study, (2) discusses the study's contributions, and (3) suggests possible profitable areas for further research.

1. SUMMARY

This study was divided into two main parts--a theoretical analysis and a field survey. A study of the literature revealed its almost complete emphasis on two geographic pricing policies--f.o.b. factory and basing point. Very little could be found as to the effects of a uniform pricing policy on the location decision, firm and industry profits, and social costs.

With this literature survey as background, an attempt was made to theoretically assess the impact of uniform pricing, as compared to a non-freight absorbing pricing policy, on the three aforementioned areas. Utilizing a number of assumptions, the following very tentative conclusions were reached in the analysis:

1. Those manufacturers desiring national distribution and using uniform pricing would locate their production facilities in Ontario. There would be little incentive for spatial decentralization. With f.o.b. pricing, production would also tend to be centralized in Ontario (or possibly Quebec)

because of market factors. However, there would also be, due to the influence of freight costs, an incentive to decentralize to the extent of establishing production facilities in British Columbia.

2. Higher industry total profits will result when f.o.b., rather than uniform, pricing is adopted.
3. No precise conclusions could be reached concerning the effects on average profits per firm of either uniform or f.o.b. pricing.
4. The evidence so far available does not permit a conclusion to be drawn as to whether the economy is better off under uniform or f.o.b. pricing.

Two industries--grocery products manufacturers and retail food private branders--were surveyed to determine the geographic pricing policies used and the relationships, if existent, between these policies and decisions concerning market areas and production locations. In the analysis of the field survey data, particular attention was paid to uniform pricing.

Due to the limited data received from the retail food private branders, only a very general analysis could be made.

The information provided by the grocery products manufacturers was not as extensive as had been expected. Consequently, very few significant conclusions could be drawn regarding the relationships between geographic pricing and markets and production locations. Several factors contributed to the limited information received:

1. Answers to the "why" type questions tended to be extremely brief; the use of a mail questionnaire coupled with a number of anonymous replies made it impossible to seek out in-depth answers to these questions.
2. Restricting respondents to providing information for only one of their products (the "primary product") resulted in very few changes in geographic pricing policy being reported.
3. Insufficient data was gathered concerning the interrelationship between the original geographic pricing policy decision used on the "primary product" and the corresponding decisions regarding market areas and production locations.

Because of the above limitations, it was not possible, as had been hoped, to determine if a causal relationship existed between the geographic pricing policy and the location decision.

The survey of the grocery products manufacturers industry, despite some weaknesses, did produce a number of interesting findings, including:

1. Uniform pricing was the most widely used geographic pricing policy for the products of the survey respondents. However, four other policies were also extensively used.
2. Although there appears to be an industry trend towards the use of freight absorbing, rather than non-freight absorbing, pricing, this trend does not seem to be favoring uniform pricing in preference to other geographic pricing policies.
3. For very few products was there a change in the geographic

pricing policy over the life of the product.

4. Most products were marketed nationally. The number of market regions did not appear to depend on whether a freight absorbing or non-freight absorbing pricing policy was used due, in part, to a greater decentralization of production by manufacturers using the latter policy.
 5. Production was highly centralized with Ontario being, by far, the most important production region. Products which were uniform priced tended to be produced in fewer regions than products priced using some other geographic pricing policy.
- Firms using a non-freight absorbing pricing policy:
- (a) Did, to some extent, produce in British Columbia as was suggested by the theoretical analysis.
 - (b) Were more likely to have changes in their locations of production than were firms using freight absorbing policies.

2. CONTRIBUTIONS MADE BY THIS STUDY

This thesis has hopefully made several contributions. The discussion on the limitations of the literature pointed out the need for much more research before a comprehensive theory on the impact of uniform pricing can be developed.

The empirical testing of this study's tentative theoretical conclusions may prove to be a fruitful approach for those researchers

interested in developing a comprehensive theory regarding uniform pricing.

The field survey findings should be valuable to the industry itself as well as to researchers interested in studying this industry, since there is no indication that data of this type have been published previously.

3. SUGGESTIONS FOR FURTHER RESEARCH

There are many more avenues which must be explored before enough will be known about uniform pricing to allow substantial conclusions to be reached about the effects of this form of geographic pricing.

Subsequent studies would logically seem to follow a three-step pattern. Firstly, other industries must be researched in order to ascertain where uniform pricing has been widely adopted and where it has not. Obviously, if it should turn out that uniform pricing is not a widely used method of geographic pricing, the need for a comprehensive theory as to the effects of this form of pricing could be seriously questioned. As a guideline for choosing industries for further study, only those industries with a relatively narrow product line should be researched. Choosing a broad industry, like the total grocery products manufacturing industry used in this research study, necessitates the combining of information on "apples and oranges" thereby reducing the usefulness of the data. As possible industries for further research, the breakfast cereal industry, the cookie and cracker industry, and the men's cosmetic industry would seem to be useful ones to study as they

appear to meet the conditions under which uniform pricing is usually found.

Secondly, it will be necessary to build a much more substantial and rigorous theory than it was possible to do in this study. The many assumptions made regarding demand elasticities, factors affecting the location decision, and social considerations, must be tested in the field and statistically verified before any significant theory can be developed.

Finally, the theory, when developed, must be tested to determine its practical significance. This testing will involve further study of the industries in which uniform pricing is widely used in order to assess whether or not the theoretical conclusions can be statistically verified in the field. To provide a comparative standard, it may also be necessary to study some of those industries in which other types of geographic pricing predominate.

Whenever possible in this theory testing stage, a personal interview survey technique, rather than a mail questionnaire, should be used. Because it will be necessary to obtain answers to "why" type questions (particularly as regards the relationship between the geographic pricing policy decision and the decisions in other areas such as the location of production facilities), the importance of probing to obtain more detailed answers makes the personal interview technique a much more useful tool for data gathering. Also, in a personal interview, it will be much easier to assess whether or not the historical data, necessary for

a study of the effects of uniform pricing, comes from company records or is just an educated guess on the part of the respondent. To obtain sufficient historical information, it will likely be necessary to discard the "primary product" concept and instead seek data for more than one product from each firm interviewed.

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APPENDICES

APPENDIX A

QUESTIONNAIRES USED IN THE STUDY

QUESTIONNAIRE

A. Notes Of Explanation

Questions 1-10 inclusive are concerned with only one of your products, the one that we ask you to designate, for purposes of this study only, as your "primary product." In order to ensure consistent designation among respondents, the following definitions of "product" and "primary" should be used.

By "product," this study refers to either an individual brand or a single item in a family brand. In either case, each "product" should include only one size. For example, if an individual brand is marketed in five sizes this would be five "products" for the purposes of this study. "Products" should also be restricted to grocery items, that is, items primarily marketed through grocery outlets.

By "primary," this study refers to the "product" having the highest dollar sales in 1965, among those "products" which meet both of the following criteria:

1. It is currently being marketed in at least two Canadian regions, and
2. It is currently being marketed in more Canadian regions than it was during its first year on the market in this country. Thus, any "products" which were marketed nationally during the first year would not qualify for the "primary" designation.

By first year on the market, this study does not include test marketing, unless the test market covered more than half of a region. Thus, test marketing which was confined to a few cities, at most, should not be included as part of the first year on the market.

By regions, this study refers to the following five in Canada, as well as any foreign countries:

British Columbia

Prairies to Lakehead (Alberta, Saskatchewan, Manitoba, and Ontario from the Manitoba border to the Lakehead)

Ontario to Lakehead (All of Ontario except that west of the Lakehead)

Quebec

Maritimes (Nova Scotia, New Brunswick, Prince Edward Island, Newfoundland)

To ensure consistency in the replies to questions 5 and 6, respondents are asked to use the following definitions for the pricing terms listed in these questions:

F.O.B. Factory: Price quoted is that at the source of supply with the buyer paying the freight.

F.O.B. Buyer's Warehouse

With No Freight Absorption: Price quoted is that landed at the buyer's place of business. It includes the actual freight cost, which is paid by the supplier.

F.O.B. Buyer's Warehouse

With Freight Absorption: Price quoted is that landed at the buyer's place of business. Included in this price is an amount less than the actual freight cost since the seller is absorbing some or all of the freight costs.

Zone: The market area is divided into zones and each buyer in a zone pays the same delivered price as any other buyer in that zone.

Uniform: All buyers pay the same delivered price for an item, regardless of their location. This policy is also referred to as single pricing, national pricing, or postage stamp pricing, but for the purposes of this study uniform pricing will be used.

Basing Point: Includes both single and multiple basing points.

For companies which are subsidiaries of foreign parents, answers should be stated in terms of their Canadian operations only.

B. Questions

1. What was the approximate percentage breakdown, by region, of the 1965 dollar sales of your "primary product"?

Region	Percentage of Sales
British Columbia.....	_____ %
Prairies to Lakehead.....	_____
Ontario to Lakehead.....	_____
Quebec.....	_____
Maritimes.....	_____
Other (Please specify).....	_____
Total.....	100 %

2. What was the first year that this "product" was on the market in Canada?
(Please see explanation on page 1).
- _____

3. During the first year this "product" was on the market in Canada, what was the approximate percentage breakdown, by region, of its dollar sales?

Region	Percentage of Sales
British Columbia.....	_____ %
Prairies to Lakehead.....	_____
Ontario to Lakehead.....	_____
Quebec.....	_____
Maritimes.....	_____
Other (Please specify).....	_____
Total.....	100 %

4. Due to this study's definition of "primary" (page 1), the regions in which the "primary product" is currently being marketed (question 1) are different than those in which it was first marketed (question 3). Indicate both the year (or years) in which region changes took place and the actual change itself.

Year of
Change

Change In Regions In Which "Product"
Marketed

_____	_____
_____	_____
_____	_____
_____	_____

5. What pricing policy are you currently following in Canada with this "product"? (If you check more than one please explain why).

F.O.B. Factory..... ()
 F.O.B. Buyer's Warehouse With No Freight Absorption..... ()
 F.O.B. Buyer's Warehouse With Freight Absorption..... ()
 Zone..... ()
 Uniform..... ()
 Basing Point..... ()
 Other (Please specify)_____.... ()

6. During the first year this "product" was on the market in Canada, what pricing policy was used in this country? (If you check more than one please explain why).

F.O.B. Factory..... ()
 F.O.B. Buyer's Warehouse With No Freight Absorption..... ()
 F.O.B. Buyer's Warehouse With Freight Absorption..... ()
 Zone..... ()
 Uniform..... ()
 Basing Point..... ()
 Other (Please specify)_____.... ()

7. If the pricing policy currently being used (question 5) is different than that used originally with this "product" (question 6), indicate the year (or years) in which pricing changes were made, the change which was made, and the reason for the change.

Year of Change	Change In Pricing Policy	Reason for Change
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

8. In what locations is this "product" currently being manufactured?

9. During the first year this "product" was on the market in Canada, in what locations was it manufactured?

10. If the current manufacturing locations (question 8) are different than those used originally for this "product" (question 9), indicate the year (or years) in which location changes were made, the change which was made, and the reason for the change.

Year of Change	Change in Manufacturing Location	Reason For Change
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

11. Ranking all of your "products" (including those which do not meet either or both of the criteria listed under "primary" on page 1) from highest to lowest, according to 1965 dollar sales, in what position did the "primary product" finish?

Within the top 3..... ()
From 4th to 10th place..... ()
Lower than 10th place..... ()

12. Would you be willing to discuss matters related to this questionnaire with me at greater length in a personal interview? If so, please indicate your name and address below?

13. Please write below (or on the back of this page) any additional comments which you feel may be useful for my study. If you want to disclose what "product" you have designated as your "primary product," this would be most appreciated. You might also briefly discuss whether or not the pricing policy, currently being used on your "primary product," is typical of the pricing policies used on your other "products." If you have any comments on the questionnaire, including any problems you may have had in answering the questions, these would be most welcome.

THANK YOU VERY MUCH FOR YOUR TIME.

2. SURVEY OF CHAIN STORE FOOD RETAILERS IN CANADA

QUESTIONNAIRE

A. Notes Of Explanation

Questions 1-11 inclusive are concerned with only one of your products, the one that we ask you to designate, for purposes of this study only, as your "primary product." In order to ensure consistent designation among respondents, the following definitions of "product" and "primary" should be used.

By "product," this study refers to either a private (retailer's) individual brand or a single item in a private family brand. In either case, each "product" should include only one size. For example, if a private individual brand is marketed in five sizes this would be five "products" for the purposes of this study.

By "primary," this study refers to the "product" which, among those products currently being marketed in at least two regions, had the highest dollar sales in 1965.

By regions, this study refers to the following five in Canada, as well as any foreign countries:

British Columbia

Prairies to Lakehead (Alberta, Saskatchewan, Manitoba,
and Ontario from the Manitoba
border to the Lakehead)

Ontario to Lakehead (All of Ontario except that west of
the Lakehead)

Quebec

Maritimes (Nova Scotia, New Brunswick, Prince Edward
Island, Newfoundland)

By first year on the market, this study does not include test marketing, unless the test market covered more than half of a region. Thus, test marketing which was confined to a few cities, at most, should not be included as part of the first year on the market.

To ensure consistency in the replies to questions 5 and 6, respondents are asked to use the following definitions for the pricing terms listed in these questions:

Individual Store Pricing: Price charged to the consumer varies from store to store, reflecting differing handling and freight costs.

Zone Pricing: The market area is divided into zones and all stores within a zone charge the consumer the same price for a product.

Uniform Pricing: All stores within the whole market area charge the consumer the same price for a product.

For companies which are subsidiaries of foreign parents, answers should be stated in terms of their Canadian operations only.

B. Questions

1. What was the approximate percentage breakdown, by region, of the 1965 dollar sales of your "primary product"?

Region	Percentage of Sales
British Columbia.....	_____ %
Prairies to Lakehead.....	_____
Ontario to Lakehead.....	_____
Quebec.....	_____
Maritimes.....	_____
Other (Please specify).....	_____
Total.....	100 %

2. What was the first year that this "product" was on the market in Canada?
(Please see explanation on page 1).
- _____

3. During the first year this "product" was on the market in Canada, what was the approximate percentage breakdown, by region, of its dollar sales?

Region	Percentage of Sales
British Columbia.....	_____ %
Prairies to Lakehead.....	_____
Ontario to Lakehead.....	_____
Quebec.....	_____
Maritimes.....	_____
Other (Please specify).....	_____
Total.....	100 %

4. If the regions in which the "product" is currently being marketed (question 1) are different than those in which it was originally marketed (question 3), indicate both the year (or years) in which region changes took place and the actual change itself.

Year of
Change

Change in Regions In Which "Product"
Marketed

_____	_____
_____	_____
_____	_____
_____	_____

5. What retail pricing policy are you currently following in Canada with this "product"? (If you check more than one please explain why).

Individual Store Pricing..... ()
 Zone Pricing..... ()
 Uniform Pricing..... ()
 Other (Please specify)_____..... ()

6. During the first year this "product" was on the market in Canada, what retail pricing policy was used in this country? (If you check more than one please explain why).

Individual Store Pricing..... ()
 Zone Pricing..... ()
 Uniform Pricing..... ()
 Other (Please specify)_____..... ()

7. If the pricing policy currently being used (question 5) is different than that used originally with this "product" (question 6), indicate the year (or years) in which pricing changes were made, the change which was made, and the reason for the change.

Year of Change	Change In Pricing Policy	Reason for Change
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

8. In what locations is this "product" currently being manufactured?

9. During the first year this "product" was on the market in Canada, in what locations was it manufactured?

10. If the current manufacturing locations (question 8) are different than those used originally for this "product" (question 9), indicate the year (or years) in which location changes were made, the change which was made, and the reason for the change.

Year of Change	Change in Manufacturing Location	Reason For Change
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

11. Are you currently doing your own manufacturing of this "product"?
If yes, in what year did you begin manufacturing this "product"?

Yes () Year _____
No ()

12. Ranking all of your "products" (including those which are only marketed in one region) from highest to lowest, according to 1965 dollar sales, in what position did the "primary product" finish?

Within the top 3..... ()
From 4th to 10th place..... ()
Lower than 10th place..... ()

13. Would you be willing to discuss matters related to this questionnaire with me at greater length in a personal interview? If so, please indicate your name and address below?

14. Please write below (or on the back of this page) any additional comments which you feel may be useful for my study. If you want to disclose what "product" you have designated as your "primary product," this would be most appreciated. You might also briefly discuss whether or not the pricing policy, currently being used on your "primary product," is typical of the pricing policies used on your other "products." If you have any comments on the questionnaire, including any problems you may have had in answering the questions, these would be most welcome.

THANK YOU VERY MUCH FOR YOUR TIME.

APPENDIX B

MODEL TO TEST THE EFFECTS ON INDUSTRY AND FIRM PROFITS
OF UNIFORM AND F.O.B. GEOGRAPHIC PRICING POLICIES

APPENDIX B

MODEL TO TEST THE EFFECTS ON INDUSTRY AND FIRM PROFITS OF UNIFORM AND F.O.B. GEOGRAPHIC PRICING POLICIES

1. ASSUMPTIONS OF THE MODEL

1. The Canadian market for grocery products manufacturers can be broken into two segments--the East with eighty per cent of the market and the West with twenty per cent.
2. Due to price inelasticity of demand, total industry sales will be independent of the geographic pricing policy used.
3. The net per unit selling prices will be:
 - (a) The same in the eastern market whether uniform or f.o.b. pricing is used.
 - (b) Higher in the western market under f.o.b. pricing. If uniform pricing is used, the prices, by definition, will be the same in both markets.
4. The per unit production and distribution costs will be the same under either uniform or f.o.b. pricing.
5. The number of firms serving the eastern market will be the same with either type of pricing. Additional firms will be needed in the western market if f.o.b. pricing is adopted.

2. VARIABLES USED IN THE MODEL

T = total industry sales. ($0.8T$ = eastern market sales and $0.2T$ = western market sales.)

- S = selling price per unit in all of Canada under uniform pricing and in the eastern market under f.o.b. pricing.
- X = ratio of the f.o.b. per unit selling price in the western market to the uniform per unit selling price in all of Canada. (X will be greater than one and XS = f.o.b. selling price per unit in western Canada.)
- C = cost per unit for production and distribution.
- N = number of firms marketing in Canada under uniform pricing, which is the same as the number of firms covering the eastern market only under f.o.b. pricing.
- Y = ratio of the total number of firms marketing in Canada under f.o.b. pricing to the total number of firms covering Canada under uniform pricing. (Y will be greater than one and YN = total number of firms marketing in Canada under an f.o.b. pricing policy.)
- M = ratio of the average cost per unit to the average selling price per unit under uniform pricing, i.e., $M = \frac{C}{S}$.

3. MODEL

(i) Industry Profits

With Uniform Pricing

Total sales revenue	=	ST
Total costs	=	CT
Industry total profits	=	$T(S-C)$

With F.O.B. Pricing

$$\begin{aligned} \text{Total sales revenue} &= S(0.8T) + XS(0.2T) \\ \text{Total costs} &= \frac{CT}{N} \\ \text{Industry total profits} &= T(0.8S + 0.2XS - C) \end{aligned}$$

(ii) Average Profits Per Firm

The average profits per firm are just the industry profits divided by the number of firms in the industry.

With Uniform Pricing

$$\text{Average profits per firm} = \frac{T(S-C)}{N}$$

With F.O.B. Pricing

$$\text{Average profits per firm} = \frac{T(0.8S + 0.2XS - C)}{YN}$$

4. CONCLUSIONS

The following conclusions can be drawn from the model:

1. Industry total profits will be higher with f.o.b., rather than uniform, pricing. The proof of this, in symbol form, is:

$$\begin{array}{lcl} \text{Industry profits under} & & \text{Industry profits under} \\ \text{f.o.b. pricing} & > & \text{uniform pricing} \end{array}$$

$$T(0.8S + 0.2XS - C) > T(S - C)$$

Dividing both sides by T

$$0.8S + 0.2XS - C > S - C$$

Adding C to both sides

$$0.8S + 0.2XS > S$$

Dividing both sides by S

$$0.8 + 0.2X > 1$$

Since X , by definition, is larger than one, the left hand side of the inequality must be greater than the right hand side, i.e., industry total profits will be higher under f.o.b. pricing.

2. The average profits per firm, under either form of pricing, will depend upon the values of X , Y and M . This can be shown symbolically as follows:

Let the average profits per firm under the two pricing methods be equal. Then:

$$\frac{T(S - C)}{N} = \frac{T(0.8S + 0.2XS - C)}{YN}$$

Multiply both sides by $\frac{N}{T}$

$$S - C = \frac{0.8S + 0.2XS - C}{Y}$$

Substitute $MS = C$

$$S - MS = \frac{0.8S + 0.2XS - MS}{Y}$$

Divide both sides by S

$$1 - M = \frac{0.8 + 0.2X - M}{Y}$$

If numerical values are substituted for two of the three unknowns, the equation can be solved for the third variable. Various values for M and X were substituted and Y was calculated. The results are shown in Table B - 1. Since costs per unit, as a proportion of the selling price per

unit, will not likely lie outside the range of 0.7 - 0.9, the values of M used in solving the equation were 0.70, 0.80 and 0.90.

The per unit selling price in the western market, under f.o.b. pricing, would not likely be more than twenty per cent above that resulting if uniform pricing were adopted, so values of 1.00, 1.10 and 1.20 were substituted for X in the equation.

TABLE B - 1

VALUES OF M, X AND Y NECESSARY TO EQUATE AVERAGE PROFITS
PER FIRM UNDER EITHER F.O.B. OR UNIFORM PRICING

Value of M	Value of X	Value of Y
0.70	1.00	1.00
	1.10	1.07
	1.20	1.13
0.80	1.00	1.00
	1.10	1.10
	1.20	1.20
0.90	1.00	1.00
	1.10	1.20
	1.20	1.40

It can be seen from the Table, as the value of M increases, the values of Y (the ratio of the number of firms in the market under f.o.b. pricing to the number of firms in the market under uniform pricing) relative to X must become larger in order for the average profits per firm to be

equal under the two methods of pricing.

For a given value of X , when Y is less than the value shown in the Table, the average profits per firm will be lower under uniform pricing. Conversely, when Y exceeds the Table value, for a given level of X , average profits per firm will be greater if a uniform, rather than f.o.b., pricing policy is adopted. For example, if the values for M and X are 0.90 and 1.10 respectively, then values of Y less than 1.20 will result in higher average profits per firm under f.o.b. pricing while values of Y greater than 1.20 will make uniform pricing the more profitable alternative.

Since there was no evidence available concerning possible values for X and Y in an actual market situation, only the general conclusions, as set out above, could be drawn about the average profits per firm under either method of pricing.

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